

American Educational Research Journal

<http://aerj.aera.net>

Educational Computer Use in Leisure Contexts: A Phenomenological Study of Adolescents' Experiences at Internet Cafés

Am Educ Res J 2009 46: 232 originally published online 27 October 2008

DOI: 10.3102/0002831208323938

The online version of this article can be found at:

<http://aer.sagepub.com/content/46/1/232>

Published on behalf of



American Educational
Research Association

[American Educational Research Association](http://www.aera.net)

and



<http://www.sagepublications.com>

Additional services and information for *American Educational Research Journal* can be found at:

Email Alerts: <http://aerj.aera.net/alerts>

Subscriptions: <http://aerj.aera.net/subscriptions>

Reprints: <http://www.aera.net/reprints>

Permissions: <http://www.aera.net/permissions>

Educational Computer Use in Leisure Contexts: A Phenomenological Study of Adolescents' Experiences at Internet Cafés

Sebnem Cilesiz
The Ohio State University

Computer use is a widespread leisure activity for adolescents. Leisure contexts, such as Internet cafés, constitute specific social environments for computer use and may hold significant educational potential. This article reports a phenomenological study of adolescents' experiences of educational computer use at Internet cafés in Turkey. The purposes of the study were to understand and describe the phenomenon in depth and arrive at the essence of adolescents' experiences with the phenomenon. Data were collected through series of in-depth phenomenological interviews with six adolescents and analyzed using phenomenal analysis. The results include potential benefits of Internet cafés as specific social leisure contexts of educational computer use for adolescent development. Implications for designing and studying computer-based informal learning environments are presented.

KEYWORDS: phenomenology, computer use, informal learning, context, adolescence, Internet café, Turkey

Educational research has placed increasing emphasis on the place and context of educational experiences (Gruenewald, 2003a, 2003b; Vadeboncoeur, 2006), building on the insight that learning experiences and outcomes are shaped by the contexts in which they are embedded (Brown, Collins, & Duguid, 1989; Resnick, 1987). Likewise, experiences of using computers are embedded in the social and cultural context in which computer use takes place (e.g., Mumtaz, 2001; Sutherland, Facer, Furlong, & Furlong, 2000; Zhao & Frank, 2003). Indeed, any human behavior, including computer use, is so embedded

SEBNEM CILESIZ is an assistant professor of cultural foundations, technology, and qualitative inquiry in the School of Educational Policy and Leadership, The Ohio State University, 29 West Woodruff Avenue, 301 Ramseyer Hall, Columbus, OH 43210; e-mail: cilesiz.1@osu.edu. Her research interests include social and cultural contexts of technology use and qualitative research methodology. Her previous work has been published in *Qualitative Inquiry*.

in and constrained by its social and cultural contexts that to construe such behavior as independent would be misleading (Granovetter, 1985). Adolescents use computers and the Internet in different contexts, including schools, libraries, homes, and public access points such as Internet cafés (Becker, 2000; DeBell & Chapman, 2003). Although the social and cultural contexts of computer use are critical to understanding adolescents' experiences with using computers, little research has investigated those experiences with respect to their contexts. Furthermore, despite the fact that computer use is a widespread leisure activity for adolescents (Roberts, Henriksen, & Foehr, 2004; Subrahmanyam, Kraut, Greenfield, & Gross, 2000) and despite the importance of leisure time and activities during adolescence (Eccles & Barber, 1999; Verma & Larson, 2003), little research has focused on computer use in leisure contexts as informal learning environments.

Formal, nonformal, and informal learning environments are three broad contexts (Maarschalk, 1988; Reed & Loughran, 1984; Smith, 1988) that afford different types of experiences with computer use. Central characteristics of informal learning environments are high participant autonomy and a lack of formal structure. Informal learning involves the process of acquiring attitudes, values, skills, and knowledge through participation in everyday social activities (Maarschalk, 1988; Smith, 1988; Vadeboncoeur, 2006). In using and learning to use computers in informal settings, social interaction is vital (Mitra & Rana, 2001; Sawchuk, 2003; Selwyn, 2005). Internet cafés—businesses that offer access to computers and the Internet on a drop-in basis for hourly fees—are a kind of informal learning environment where social interaction is at the heart of computer use. They represent a specific social and cultural context—affording virtually full autonomy and prolonged social interactions characteristic of *third places* (Liff & Steward, 2003; Uotinen, 2003)—that mediates the experiences of adolescents with computers and promotes specific adolescent cultures (Laegran, 2002).

Although Internet cafés are a widespread phenomenon in many countries, particularly popular among adolescents¹ (Bolukbas, 2003; Laegran, 2002), their educational potential has not been studied to date. The present study was a phenomenological investigation (Husserl, 1969, 1970a, 1970b; Moustakas, 1994) of adolescents' experiences of educational uses of computers at Internet cafés in Turkey. Its purpose was to understand and describe in depth the phenomenon of educational uses of computers at Internet cafés and to arrive at the *essence* (Husserl, 1969; Moustakas, 1994) of these experiences. This study was a response to calls for research on specific contexts of computer use (Hall & Israel, 2004), on particular contexts of education (Vadeboncoeur, 2006), and on adolescents' leisure experiences outside formal educational and family settings (Eccles & Barber, 1999). It builds on and contributes to the literature on computer use in informal learning environments as well as the literature on Internet cafés.

The remainder of this article is structured as follows. First, I provide a review of the literature on computer use within three broad contexts. Then, I describe the context and methodology of this study, followed by a

presentation of the results. I conclude the article with a discussion of the results and implications.

Contexts of Education and Computer Use

The place and context of educational experiences are increasingly recognized as important (Gruenewald, 2003a, 2003b; Vadeboncoeur, 2006); learning experiences and outcomes are shaped by the settings in which learning activities are embedded (Brown et al., 1989; Resnick, 1987). A context is a constellation of factors such as location, relationships, content, pedagogy, assessment, control, supervision, organization, and schedules (Vadeboncoeur, 2006; Wellington, 2001). Increasing emphasis on contexts is reflected in recent studies focusing on educational experiences in particular learning spaces (Barton, Tan, & Rivet, 2008; Nespor, 2000). Like all educational experiences, computer use is embedded in and shaped by the social and cultural attributes of the environment in which it takes place (e.g., Nicolopoulou & Cole, 1993; Sutherland et al., 2000; Zhao & Frank, 2003).

An important framework for conceptualizing contexts of educational experiences distinguishes formal, nonformal, and informal learning environments (Maarschalk, 1988; Reed & Loughran, 1984; Smith, 1988, 2006; Vadeboncoeur, 2006), each comprising a range of micro-contexts that are constellations of different attributes (e.g., Cole, 1996; Nicolopoulou & Cole, 1993; Zhao & Frank, 2003). In the present article, I focus on reviewing the relationship between context and the experience of computer use in the three broad contexts—formal, nonformal, and informal—prior to describing the specific context of the present study, Internet cafés.

Learning Environments as Contexts of Education

Formal learning environments are constituted by recognized educational institutions, primarily the planned and hierarchically organized, graded system from elementary school through university (Maarschalk, 1988; Smith, 1988, 2006). Nonformal learning environments are planned but highly adaptable organized settings (such as after-school programs, in-service training, self-help groups, and educational television and radio) in which an intentional effort is made to influence people for learning that fills specific needs (Maarschalk, 1988; Reed & Loughran, 1984). Informal learning environments are integrated with everyday life and social activities (Greenfield & Lave, 1982; Vadeboncoeur, 2006), whereby individuals acquire values, attitudes, skills, and knowledge in spontaneous situations, from peers, family, and neighbors; work and play; and marketplace, library, and mass media (Maarschalk, 1988; Smith, 1988).

Informal learning is driven and enabled by conversation, involves exploring and enlarging experience, and can take place in any setting (Smith, 1988). In informal learning environments, individuals choose and pursue the content of learning (Dierking & Falk, 2003), mainly through social interactions

such as observation, imitation, and receiving demonstration (Greenfield & Lave, 1982; Reed & Loughran, 1984). Informal learning forms the largest part of educational experiences, has long-lasting results (Dierking & Falk, 2003; Reed & Loughran, 1984), occurs over time (Vadeboncoeur, 2006), and is highly effective (Illich, 1971; Resnick, 1987). Informal learning environments differ from nonformal learning environments in their structure.² The former allow participants spontaneity and high autonomy over their participation and activities, whereas the latter are designed to fulfill certain objectives and are structured accordingly, for example, in the form of membership or enrollment, adult supervision, and institution-defined roles.

Computer Use in Formal Learning Environments

Formal educational institutions constitute a prominent context of educational experiences that affords a range of activities and outcomes. Research has shown the shaping influence of school space, school culture, range of legitimate activities, and pedagogy on educational experiences and learning in formal learning environments (Barton et al., 2008; Brown et al., 1989; Nespor, 1987, 2000). The largest body of literature on computer use in formal contexts focuses on academic, cognitive, and attitudinal outcomes (e.g., Cradler, 1994; Kozma, 1991; Kulik, Bangert, & Williams, 1983; Papert, 1993) as well as effective pedagogy (e.g., Becker, 2000; Cuban, 1993; Cuban, Kirkpatrick, & Peck, 2001; Pea, 1997; Sandholtz, Ringstaff, & Dwyer, 1997) associated with the use of computers in teaching and learning curricular content.

Few studies on computer use in formal learning environments have focused on context, highlighting the importance of school culture (Clark, 2006) and the role of teacher dispositions (Vannatta & Fordham, 2004) in the effective implementation of technology. For example, Zhao and Frank (2003) conceptualized schools and their social contexts as ecosystems in which certain uses of computers emerge and live. They argued that similar to species' adapting to an ecosystem, only certain uses of computers survive in a school ecosystem, depending on key contextual factors such as the hierarchical organization of the environment and teachers' interactions with it, available technologies, and teachers' perceptions of computer uses. In addition, the use of computers for instruction is mediated by teachers' beliefs about learners, the role of technology, and the institutional culture of good teaching (Windschitl & Sahl, 2002). The organization and logistics of schools and classrooms, supervision and intervention, curricula, and teachers' practices and attitudes are other contextual factors shaping the way computers are used in schools (Wellington, 2001).

These studies thus suggest that contextual factors of formal learning environments shape the way computers are used, enabling certain uses and obstructing others. For example, while adolescent computer users can be characterized into seven types on the basis of their patterns of use—hacker, game player, game creator, eager tool user, reluctant tool user, luddite, and sporadic user—each classroom activity involving computers accommodates only certain types of users (Upitis, 1998); those who are excluded may lose

their interest in and change their attitudes toward computer use in formal learning environments (Mumtaz, 2001). Additionally, because adolescents spend a large portion of their time outside of school, there is increasing attention to their activities and potential educational opportunities in nonschool settings (Dierking & Falk, 2003; Vadeboncoeur, 2006), so it is essential to explore their use of computers in a variety of contexts.

Computer Use in Nonformal Learning Environments

Nonformal learning environments are organized settings, such as youth clubs and after-school programs, in which an intentional effort is made to foster learning in specific areas (Maarschalk, 1988; Reed & Loughran, 1984). They differ from formal learning environments in their structure (e.g., mixed-age groups, flexible schedules), which may shape experiences with and outcomes of using computers (Hall & Israel, 2004). Research on computer use in nonformal learning environments has focused on program evaluation and academic outcomes in computer-based after-school and out-of-school programs,³ reporting that participation in those environments can lead to positive academic outcomes, such as computer literacy, linguistic and thinking skills, and academic achievement (Blanton, Moorman, Hayes, & Warner, 1997; Hall & Israel, 2004; Mayer, Schustack, & Blanton, 1999; Schustack, Strauss, & Worden, 1997).

In addition to academic results, after-school computer programs may generate outcomes such as positive social-emotional, academic, and technical attitudes associated with the use of computers (Gallagher, Michalchik, & Emery, 2006); indeed, in some instances other outcomes such as community service by designing Web pages, self-expression through digital media, and long-term culture change, were observed, although the set learning goals of the programs were not accomplished (Gallego & Cole, 2000; Zhao, Tan, & Mishra, 2000). More generally, research points to the potential of nonformal learning environments to offer positive developmental outcomes for adolescents, such as exploring their senses of self and future opportunities, the development of creativity and expression, and exposure to multiple perspectives and diversity (Eccles, 1999; Heath, 2001; Nocon & Cole, 2006; Smith, 2006; Vadeboncoeur, 2006). These benefits are more likely to surface when adolescents are given a choice of activities and opportunities for discussion and interaction (Eccles & Barber, 1999; Hall & Israel, 2004).

Conversely, if the degree of independence offered does not meet adolescents' desire for autonomy, they may develop negative views of these contexts as well as low levels of interest and engagement (Eccles & Barber, 1999; Liu et al., 2002). Paradoxically, it has been noted that nonformal learning environments are becoming more structured (Bekerman, Burbules, & Silberman-Keller, 2006), perhaps because their funding is contingent on the fulfillment of (academic) program goals (Gallagher et al., 2006; Mahoney & Zigler, 2006; Nocon & Cole, 2006). A common challenge for nonformal learning environments is to provide activities that are engaging to participants while maintaining their school-like norms and structure, because the choice of activity

and engagement may lead to tensions between program staff members and participants (Bruce & Bruce, 2000; Nicolopoulou & Cole, 1993). Indeed, despite the organizers' intentions, within the structure of after-school computer programs operated by schools, it was not possible to create a true clubhouse spirit whereby students would have the means and freedom to decide how and when to use technology to achieve their own goals (Zhao, Mishra, & Girod, 2000). Thus, the structure inherent in nonformal learning environments facilitates a bounded range of experiences with computer use; to understand the full spectrum of experiences and outcomes with computer use, I turn to the literature on computer use in informal learning environments.

Computer Use in Informal Learning Environments

Computer use in informal learning environments is by definition not structured or planned, allowing a high level of individual autonomy. Studies on computer use in informal learning environments tend to focus on the context of home; a smaller body of research on everyday computer use implies the existence of characteristics of informal settings (e.g., spontaneity) without reference to context. At home, adolescents' experiences with computers include recreational (e.g., playing games, e-mail) and academic (e.g., completing school assignments, word processing) elements (Becker, 2000; DeBell & Chapman, 2003). A wealth of literature focuses on the relationship between home computer use and academic achievement, reporting positive relationships between general home computer use and academic achievement, in subject areas as well as overall grades (e.g., Attewell & Battle, 1999; Jackson et al., 2006; Subrahmanyam et al., 2000). Certain uses of computers at home, such as word processing and video games, were found to be positively related to the development of critical thinking, spatial, and visual skills (Becker, 2000; Pillay, 2003; Subrahmanyam et al., 2000). Finally, home computer use was found to be related to long-term positive attitudes toward computers and interest in advanced computer courses (Selwyn, 1998, 2005) as well as positive developmental outcomes for young children (psychological reasoning and feelings of accomplishment) and for adolescents (identity development) (Turkle, 1984).

Parental influence and perspectives constitute an important contextual element of home computer use; adolescents' activities at home are shaped by parental authority, even when parents are not physically present (Downes, 2002; Facer, Sutherland, Furlong, & Furlong, 2001; Sutherland et al., 2000). In comparison with formal learning environments, home may be considered a less structured and thus more suitable setting to explore the power of computing (Wellington, 2001). However, it is a unique informal learning environment, which provides less than full autonomy (because of parental influence) and induces largely solitary uses of computers for adolescents (Roberts et al., 2004; Subrahmanyam, Greenfield, Kraut, & Gross, 2001).

A few other studies on computer use in informal learning environments have investigated the processes of everyday and leisure use of computers. For example, an investigation of the uses of computers located in outdoor

kiosks in slums in India by children (aged 5–16 years) without guidance or instruction demonstrated children's ability to master basic computer operations within a few days by self-instruction, forming impromptu classes, and seeking help from peers, emphasizing the importance and potential of free exploration on the computer (Mitra & Rana, 2001). Social interaction in everyday computer use, such as mentoring by social contacts during the initial stages of computer use, was also found to be important for adults (Selwyn, 2005). Learning to use computers within everyday peer networks is a gradual process consisting of isolated, emergent learning moments in the ongoing activity of computer use (Sawchuk, 2003; Selwyn, 2005); it demonstrates a specific form of peer interaction that is distinct from the pedagogy of formal learning and from informal conversation that resembles peripheral participation in a community of practice (Sawchuk, 2003).

Communities of practice are groups of individuals who share a concern or a passion for an experience in a common domain, share knowledge and learn from one another aspects of their practice as they interact regularly, and consequently increase their knowledge as individuals and as a group through sustained interaction (Wenger, 1999). Learning, particularly developing expertise in the practice itself, is inherent in communities of practice. Participation in communities of practice not only enables the individuals and the group to develop expertise and learn, but it also fosters the building of identity (Wenger, 1999). Defining the self and building identity in social groups formed around the interest of computer use were also highlighted by others (Sawchuk, 2003; Turkle, 1984, 1997). Desire for affiliation with a community was found to be a major incentive of highly committed leisure computer users (Rheinberg & Tramp, 2006). Specifically, adolescents' interest in computer use has to do with the construction of identities and reproduction of peer group culture; computer use and expertise can also serve as an arena for conversation in peer groups and thus function as a currency by which friendship is constructed (Facer et al., 2001; Roberts et al., 2004).

Internet Cafés as Informal Learning Environments

Internet cafés are a distinct kind of informal learning environment that affords sustained social interaction and leisure use of computers with virtually full user autonomy, enabling users to choose their activities on the computer to the extent allowed by a country's laws (which may, for instance, prohibit access to certain kinds of Web sites). Internet cafés are businesses that offer public access to computers and the Internet on a drop-in basis for hourly fees (e.g., Liff & Laegran, 2003; Liff & Steward, 2003). The defining characteristic of Internet cafés is having a number of Internet-capable computers in a café-like environment (Laegran & Stewart, 2003; Liff & Steward, 2003; Wakeford, 2003). Internet cafés exist in many countries⁴ and are especially prevalent where computers or Internet subscription rates are not affordable for large parts of the population (Sairosse & Mutula, 2004). However, distinct from other public computer access points, such as libraries

and computer business centers (Liff & Laegran, 2003), Internet cafés are not mere sites for computer access. They are “technosocial spaces” (Laegran & Stewart, 2003, p. 360) where attributes of a café context enhance and complement the experience of leisurely computer use (Liff & Laegran, 2003). Socializing and making friends are important functions of Internet cafés, particularly for adolescents (Bolukbas, 2003; Laegran, 2002; Sairosse & Mutula, 2004).⁵ For instance, in rural Norway, Internet cafés replace the function of gas stations as spaces for youth cultures that allow adolescents to belong to a certain lifestyle as well as to extend their repertoire of identities and network in the local community (Laegran, 2002).

Studies of various Internet cafés have found that Internet cafés resemble third places, affording a particular form of sociality (Liff & Stewart, 2003; Uotinen, 2003). Third places are social gathering places where conversation is a major attraction and activities are largely unplanned, unscheduled, unorganized, and unstructured (Oldenburg, 1999, 2001). They provide common ground for people to socialize regularly and form a community without formal criteria for membership and exclusion, enabling sustained and prolonged social relationships; regularity and trust are important factors for community acceptance (Oldenburg, 1999).

Education and Internet Cafés in Turkey

Turkey is a country located in southeastern Europe and southwestern Asia, with a population of 70.5 million (Central Intelligence Agency, 2008). The country's education system includes a structure of college admissions that is governed by a centralized comprehensive test and is preceded by 3- and 4-year high schools.⁶ Many adolescents pursue additional skills, such as foreign languages or computer-related competencies, to gain advantage in a competitive labor market. Because of a relatively low purchasing power—Turkey's gross domestic product per capita is \$8,900 (Central Intelligence Agency, 2008)—owning a personal computer is not feasible for a large portion of the population. For example, in 2003, there were 40.7 personal computers per 1,000 people in Turkey; this figure was 625 in the United States (The World Bank, 2003, p. 300). A scarcity of resources also impairs the use of educational technology in many schools (Akbaba-Altun, 2006; Bayram & Seels, 1997; Yedekcioglu, 1996). Additionally, given the relatively low hourly charges for computer use at Internet cafés in Turkey (approximately \$0.50, according to Daub, 2004), many adolescents turn to Internet cafés to use computers (Tor & Erden, 2004), which makes their educational potential worthy of investigation. While the state acknowledges the benefits of computer and Internet access for children and adolescents, it controls Internet cafés strictly (Altintas, Aydin, & Akman, 2002; Yesil, 2003). Access to Web sites that are illegal by the country's laws, such as those with pornographic or separatist content, is banned, and the operations of Internet cafés are restricted⁷ and enforced by police raids (Moore, 2001; Yesil, 2003).

The Present Study

The study reported in the remainder of this article was a phenomenological investigation. The phenomenon studied was adolescents' *educational uses of computers at Internet cafés*, which I hereafter refer to as *the phenomenon*. The purposes of the study were to understand and describe in depth the phenomenon of educational uses of computers at Internet cafés and to arrive at the essence of these experiences. The study was conducted in a city of 250,000 in Turkey, referred to here as Yesildere (all names of places, persons, and institutions used throughout this article are pseudonyms, and any identifying information has been altered or removed). According to a member of the local Internet café union, there are approximately 180 Internet cafés in Yesildere; data were collected in the two largest Internet cafés in the downtown area.

Methods

Methodological Framework

I used a phenomenological framework and methodology (Husserl, 1969, 1970a, 1970b; Moustakas, 1994) to study adolescents' lived experiences of educational uses of computers at Internet cafés. A phenomenon is the object of a conscious subject's experience as it presents itself (Moustakas, 1994). Phenomenology dates back to the beginning of the 20th century and includes *transcendental*, *existential*, and *hermeneutic* traditions (Audi, 2001; Schwandt, 1997). This study uses the transcendental phenomenological framework developed by Edmund Husserl, which I hereafter refer to as *phenomenology*. Phenomenology was a suitable methodology for the purposes of this study for two reasons. First, it is concerned with lived experiences and seeks reality in individuals' narratives of their experiences of and feelings about specific phenomena, producing their in-depth descriptions. Second, phenomenology is the study of the *lifeworld* (*Lebenswelt*), defined as "what we know best, what is always taken for granted in all human life, always familiar to us in its typology through experience" (Husserl, 1970a, pp. 123–124). Everyday experiences of educational uses of computers at Internet cafés are embedded in the participants' lifeworlds. Phenomenology is a systematic attempt to come in direct contact with these worlds, uncover and describe the meaning structures of lived experiences, and arrive at a deeper understanding of the nature or meaning of everyday mundane experience of phenomena (Lauer, 1965; van Manen, 1990). In doing so, it is concerned with the a priori or intuitive basis of knowledge (Crotty, 1998; Husserl, 1969). "An epistemological investigation that can seriously claim to be scientific must satisfy the principle of freedom from suppositions" (Husserl, 1970b, p. 263). This is accomplished by engaging in *epoché* (or bracketing), meaning disciplined, systematic efforts to suspend one's natural standpoint and prejudgments regarding the phenomenon being investigated (Husserl, 1969; Moustakas, 1994).

Phenomenology aims to obtain direct descriptions of experience without considering its cause or attempting to ascertain whether these descriptions are in agreement with an independent reality (Husserl, 1969; Kvale, 1996; Polkinghorne, 1989). The only evidence phenomenology seeks and accepts is that offered by consciousness itself (Lauer, 1965); “pure essential truths do not make the slightest assertion concerning facts” (Husserl, 1969, p. 57). Thus, the truth value of a description of experience is epistemically irrelevant to the phenomenological enterprise. Furthermore, phenomenology does not allow for empirical generalizations, the establishment of functional relationships, or the development of theory with which to predict or control; instead, “it offers us the possibility of plausible insights that bring us in more direct contact with the world” (van Manen, 1990, p. 9). The alternative to generalizability is to present in-depth descriptions for readers’ inspection and exploration (American Educational Research Association, 2006; Lincoln & Guba, 1985; Seidman, 1991).

Phenomenology is founded on a Cartesian dualist ontology of realism and idealism (Beyer, 2004). Realism maintains that a world exists without humans’ consciousness of it, whereas idealism maintains that the external world is not independent of cognizant minds. Conscious subjects and their objects are separate, yet they interact; meaning is to be found in this relationship (Crotty, 1998). Every psychical experience consists of two dimensions: *noesis* and *noema* (Husserl, 1969; Moustakas, 1994). Noesis is the act of experience, such as perceiving, feeling, thinking, remembering, or judging. Noema is the object of action, such as the perceived, the felt, the thought, the remembered, or the judged. Any existing noesis corresponds to a noema, and vice versa; this essential relationship between noesis and noema is referred to as *intentionality* (Audi, 2001; Crotty, 1998), indicating that a subject intends toward an object (Kockelmans, 1994). This study was concerned with the phenomenon of educational uses of computers at Internet cafés (noema) as a group of participants experienced it (noesis); neither of these dimensions can exist without the other.

The goal of phenomenological research is to uncover the essence of the experience of a specific phenomenon. Essence is the condition or quality of an experience commonly shared by studied subjects; it is what makes an experience what it is and without which an experience would not be what it is (Husserl, 1969; Moustakas, 1994; van Manen, 1990). Every experience is a manifestation of its essence. As such, every experience consists of textures (varying appearances) and structures (what might account for or underlie the manifestation). The essence of the experience of a phenomenon can be described through an investigation of the structures that underlie the instances of that essence, focusing on the commonalities of the nature of the experience (Polkinghorne, 1989; van Manen, 1990).

Selection of Participants

Adolescent high school students who regularly used computers educationally at Internet cafés constituted the participant pool. This age group was

chosen for a number of reasons: first, studying the out-of-school activities of adolescents is important (Dierking & Falk, 2003; Eccles & Barber, 1999; Vadeboncoeur, 2006); second, adolescents make up the largest group of Internet café users in Turkey⁸ (Bolkbas, 2003); and third, among Internet café patrons (who legally must be aged 12 years or older), high school-age adolescents are better suited for a phenomenological study than younger ones. Older adolescents are more likely to have the capacity to reflect on and provide full and sensitive descriptions of their lived experiences, which is essential for in-depth phenomenological interviews (Creswell, 2007; Polkinghorne, 1989).

A phenomenological framework requires a relatively homogeneous group of participants (Creswell, 2007), so flyers were posted in two Internet cafés with similar features: Ephesus and Cappadocia. Individuals selected to participate in a phenomenological study must have significant and meaningful experiences of the phenomenon being investigated (Creswell, 2007; Harrist, 2006; Polkinghorne, 1989). Thus, criterion sampling—selecting individuals who fulfill certain criteria as participants—works well with phenomenological studies, particularly when the criteria are indicative of having significant experiences of the phenomenon (Creswell, 2007). I made contact visits to screen volunteers according to predetermined criteria to determine if they qualified as participants (Seidman, 1991). The first criterion was attending Internet cafés regularly, at least twice a week, to ensure that the phenomenon was a part of the adolescent's lifeworld. The second criterion was having experiences of certain uses of computers that are indicative of educational use. This criterion was evaluated using an inclusive list of educational uses of computers based on the International Society for Technology in Education's (2000) *National Educational Technology Standards for Students*. In a phenomenological study, "the important reality is what people perceive it to be" (Kvale, 1996, p. 52), so it is essential to allow participants to illustrate their experiences of phenomena rather than imposing definitions on them (Ashworth, 1999). Thus, during the contact visit, rather than using a standard measure, I asked volunteers to briefly describe if and how they used computers educationally at Internet cafés (without providing any information of what constituted educational uses). Those who referred to two or more items on the list of educational uses in their descriptions were considered qualified to participate in the study; participants referred to four to eight items. (For an example of similar participant selection in a phenomenological study, see Mastain, 2006.)

Treating what constitutes education or educational uses of computers in this open-ended way is particularly meaningful considering the challenges and disagreements about what constitutes education (or educational computer use) in informal learning environments (Alexander & Wade, 2000; Vadeboncoeur, 2006). Indeed, Alexander and Wade (2000) concluded that "perhaps, the students themselves should define what learning is in these informal settings" (p. 351). Other criteria to qualify as a participant included being a high school student, agreeing to participate in a series of audiotaped interviews, and having written parental or guardian consent to participate. Consistent with recommendations for sample size in the phenomenological

literature (Creswell, 2007; Polkinghorne, 1989), six adolescents were recruited as participants.

Data Collection

Data were collected through series of three open-ended, in-depth phenomenological interviews, following Seidman (1991). Phenomenological interviews were consistent with the framework and suitable for the purposes of this study because of their focus on “the experienced meanings of the subjects’ life world” (Kvale, 1996, p. 53). Seidman explained,

The first interview establishes the context of the participants’ experience. The second allows participants to reconstruct the details of their experience within the context in which it occurs. And the third encourages the participants to reflect on the meaning their experience holds for them. (p. 17)

Accordingly, in this study, the first interview covered the participant’s overall experiences of the phenomenon as well as its history up to the present time. The second interview covered the details of participant’s lived experiences by focusing on experiences that stood out, feelings associated with them, and their meaning. The third interview consisted of open reflection on the meaning of experiences as well as revisiting the previous two interviews. The first two interviews were semistructured, while the third one was unstructured (Kvale, 1996; see Appendix C for the interview guide). A brief survey was administered prior to the interviews to collect demographic and background information about the participants to put the findings into context and interpret the data (see responses in Appendix B).

Interviews were conducted at public places, mainly in quiet corners of Internet cafés, and were audiotaped. The lengths of the interviews varied between 40 and 90 minutes, consistent with Seidman’s (1991) recommendation for nonadult participants. Interviews were transcribed verbatim (Poland, 2002), and the transcriptions of the three interviews were merged into one document for each participant, which constituted the raw data for this study.

Data Analysis

Data were analyzed using *phenomenal analysis*, following Moustakas (1994). In the first step of phenomenal analysis, I *horizontalized* the data by ascribing equal value to every statement and selecting statements relevant to the phenomenon. I translated the relevant statements into English as literally as possible; I subjected both my selections and translations to peer review to ensure validity (details follow below). In the second step, I transformed the data into statements representing *meaning units* by splitting statements whenever there was a transition in meaning. In the third step, I crafted profiles (Seidman, 1991) for each participant, constituted by his or her verbatim statements representing meaning units rearranged in narrative form, with my

insertions placed within brackets.⁹ Each statement by an individual expressing a meaning unit, either shared with other participants or unique to that individual, was included in his or her profile. Profiles are coherent narratives having a beginning, a middle, and an end, following the general structure of the interviews (Seidman, 1991); in the present study, this profile structure comprised history of computer use and early experiences at Internet cafés, current experiences of the phenomenon and the meaning of Internet cafés, and reflections on the overall experience. These profiles are called *individual textural descriptions*; they represent a participant's description of his or her experiences of the phenomenon and consist of the textures: the particular appearances of an individual manifestation of the essence. In the fourth step, I engaged in *imaginative variation* to interpret participants' descriptions represented in the textural descriptions, to investigate the structures that might underlie the individual manifestations. Then, I crafted *individual structural descriptions* of each participant's experience that reflected my re-presentation of the participant's own understandings (Titchen & Hobson, 2005).

In the fifth step, I identified the similarities in the textures of participants' experiences. Six meaning units were shared by five participants, constituting the textural similarities, and are called the *shared meaning units* (shown by participant in Table 1). In the sixth step, I integrated all individual textural descriptions around the shared meaning units to create one textural description representing the group as a whole, called *composite textural description*. In the seventh step, I integrated the individual structural descriptions along essential structural elements, arriving at the *composite structural description*. In the final step of phenomenal analysis, I synthesized the composite textural description into the composite structural description to create a general description of the phenomenon called the *textural-structural synthesis*. The synthesis consists of an elaboration of *essential structural elements* and supporting textural elements and represents the essence of the experience of the phenomenon. The essence of an experience is never completely exhausted, so this essence does not represent a universal truth but the essence at a specific time and place, as manifested in a specific collection of individuals' experience and as seen from the perspective of an individual researcher (Moustakas, 1994).

Validity

In this study, I took several measures to address some of the traditional (Guba & Lincoln, 1982; Merriam, 1995) as well as alternative notions of validity (Lather, 1986a, 1986b; Lincoln, 1995). In phenomenological research, a high level of objectivity is required on the part of researchers to produce valuable knowledge (Husserl, 1969, 1970b; Moustakas, 1994; Titchen & Hobson, 2005). First, to ensure phenomenological validation, I engaged in the *epoché* (bracketing) process, to identify and set aside throughout the study my presuppositions from previous encounters or experiences with the phenomenon (Ashworth, 1999; Moustakas, 1994). I began by articulating a subjectivity statement to capture and bracket my subjectivity regarding the

phenomenon (Peshkin, 1988) and continued the *epoche* process by abstaining from making judgments throughout the study.

Second, to reduce the impact of my subjectivity on the findings (Merriam, 1995; Wolcott, 1990), I used two forms of peer review provided by a scholar of educational technology fluent in Turkish and English. First, at the horizontalization stage of data analysis, this colleague reviewed my selection of participants' statements on the basis of their relevance to the phenomenon to ensure that my judgment did not misrepresent the relevant data. Second, my colleague reviewed my translations of these statements from Turkish into English to ensure that meanings were not distorted. On the basis of this peer review, I revised the selected statements and their translations.

Third, I used member checks (Lather, 1986a, 1986b; Lincoln & Guba, 1985; Merriam, 1995). Prior to the second and third interviews, I asked the participants to verify my initial understandings of the major points from the preceding interview(s); moreover, the third interview was dedicated to reflection and member check (Seidman, 1991). This process ensured that the participants' voices, rather than my own, are represented in the findings (Lincoln, 1995).

Fourth, I responded to calls for transparency of the research process (American Educational Research Association, 2006; Ragin, Nagel, & White, 2004). I disclose my subjectivity statement (Wolcott, 1990) in Appendix A to enable readers to put findings into context and to understand how the data were interpreted (Merriam, 1995). I provide detailed accounts of how decisions such as participant selection were made and how data were collected and analyzed; report the limitations of the study; include the complete textual and structural descriptions of some participants, thus presenting both negative and positive points (Lincoln & Guba, 1985); and provide a detailed description of the study context and present information about each participant. This transparency facilitates readers' evaluations of how closely their situations match that of this study and judgments of the transferability of the findings (American Educational Research Association, 2006; Guba & Lincoln, 1982; Lincoln & Guba, 1985; Merriam, 1995; Seidman, 1991; Wolcott, 1990).

Fifth, I heeded calls for reciprocal relationships with participants rather than unilaterally beneficial ones (Lather, 1986b; Lincoln, 1995). For example, sharing personal information cannot be appropriately compensated financially. Thus, in addition to compensating the participants for their time with 6 hours of access at the Internet café of their choice, I offered to share some perquisites of my privilege—that of being an educated person (Lincoln, 1995). Even after data collection was completed, I made myself available to participants to provide information and advice on matters related to college admissions and studying abroad.

Results

The phenomenon investigated in this study is educational uses of computers at Internet cafés. As described earlier, no definition of educational

uses was imposed on the participants; rather, it was derived from the data. In summary, the meaning of educational uses from the participants' point of view includes learning curricular subjects and content; developing computer, language, and social skills; expanding extracurricular interests; developing emotionally and maturing; developing values and multicultural awareness; and learning about careers and physical development.

Data analysis resulted in 15 narratives: textural and structural descriptions for each of the six participants, a composite textural description, a composite structural description, and a textural-structural synthesis representing the essence of the experience. Within the space limitations of this article, I present the results by providing a table and a brief description of shared meaning units to demonstrate textural commonalities, individual textural and individual structural descriptions of three selected participants to demonstrate in-depth examples of participants' meanings and experiences of the phenomenon, and the textural-structural synthesis describing the essence of the experience of the phenomenon.

A meaning unit was designated as a shared meaning unit when five or more participants' statements included it. The three informants represented in detail—Mehmet, Emir, and Aylin—were selected on the basis of the textures of their experiences relative to those of the group. Emir, with fewest (four) of the shared meaning units, was selected as least representative of the group. Mehmet, with all six of the shared meaning units, was selected as most representative of the group. The statements of each of the remaining four participants included five shared meaning units. Among them, Aylin was selected as most representative: one of three female respondents, one of three who had been preparing for the university entrance test, and one of two whose use of computers was framed by their studies in English. Appendix B contains information about the participants, and Table 1 contains the shared meaning units by participant.

History as a game player refers to a participant's descriptions of his or her past experiences of playing computer games prior to educational uses of computers. Learning from the Internet refers to a participant's statements about learning a specific topic from activities on the Internet, such as learning German from Web pages. Gaining "general cultural" knowledge refers to statements about gaining general intellect, for example, on world politics and literature. Incidental learning refers to statements that involve learning facts or skills while using computers for a different purpose (usually over a sustained period), for example, improving English-language and keyboard skills. Being in control refers to a participant's statements about having choice and control over activities at the Internet café (usually in contrast to school). Experiences as lifestyle refers to a participant's statements about his or her experiences as his or her way of life, preferences, and habits, such as reading online newspapers daily instead of reading paper copies.

As explained in the "Methods" section, a textural description represents a participant's description of his or her experience of the phenomenon, and a structural description reflects my re-presentation of the participant's own

Table 1
Shared Meaning Units by Participant

	Emir	Amber	Mehmet	Aylin	Leyla	Deniz
History as game player	x	x	x	x		x
Learning from the Internet	x		x	x	x	x
Gaining "general cultural" knowledge		x	x	x	x	x
Incidental learning	x	x	x	x	x	
Being in control		x	x	x	x	x
Experiences as lifestyle	x	x	x		x	x

understanding; whether these descriptions correspond to an independent reality has not been ascertained. The textural-structural synthesis is an in-depth description of the participants' experiences of the phenomenon and represents the essence. These results reflect the experiences of the participants of this study, hence no generalization beyond the participants and context studied is intended; transferability of the findings to other settings may be judged by readers (American Educational Research Association, 2006; Seidman, 1991).

Textural Description of Mehmet's Experiences

There was a computer [in our home] before I was born. I started going to Internet cafés to play [the game] Counter Strike. I have been going for 10 years. I am getting bored of games; [it] is like a transition period; you first play games, then you get bored and move on to the Internet. [In] high school¹⁰ I started using the Internet to learn German. I used to surf the Internet a lot [and] search anything that comes to my mind in Google, but I started getting tired of the Internet. I used to chat [but] never grew fond of chat anyway; I found out that one could not learn anything from it. I played with 3D Studio Max, Excel, Front Page, Delphi, Visual Basic, Visual C++. I made Web pages for my friends [and] [my school's] Web site. I search [the Web] about fixing computers and programming; I explore [their codes and] try to develop codes in the same way. I can do pretty advanced things within my limits, creat[ing] applications in Delphi.

I believe computers to be the most useful tools [in education]. Computers helped me very much in becoming like this; I gained a lot of information about programming [and] related to my coursework. I could say that I learned everything about schoolwork from the Internet. I make a lot of use of the Internet in solv[ing] science problems, for example, [by posting] university entrance test preparation questions [and] answers [on] a forum. Maybe I could not have found these resources from books or libraries. I would not have so much knowledge without computers. When I studied German [on the Web] my grades were increasing. My English is [now] very advanced. [In] MS-DOS, everything was in English [and] now most applications are in English; I learned [English] while playing with those programs. [Using computers also] develops our general cultural knowledge. For example, I am very good at [solving] crossword puzzles; I believe

computers helped. On the one hand, [Internet café] distances you from school, on the other hand it makes you closer to school. There is the possibility that you will cut classes to come here, but there is also the possibility that you will go to school after studying here. Of course it depends on what kind of a person you are.

[Using computers at Internet cafés] is more a social act; it is more fun to be with friends. I believe Internet cafés are geared for this purpose—uniting people who understand this business [computers]. If everyone would sit at home, they could not exchange information with each other. Even a small child can come [to] an Internet café and learn something. At home you only develop yourself, here you can also teach your friends or people who sit by you; it benefits not just you but others too. [They learn] by watching me, [or] maybe I explain or show [something] to them, have them do things. I taught someone Flash for a month, [because] I want them to develop too, so that there are people around me who understand me regarding computers. [Internet cafés] have a large place in my life. Because I have spent a long time in my life with [them], I would feel that something is missing if I did not have them. There would be a large void in my life. I come every day; I spend most of my time at the Internet café. After a while it becomes a need. It feels as though you cannot do without it. It is like addiction in some respects. Maybe it should not be called addiction, but it is a habit, for some reason we feel like coming here. When I first started going to Internet cafés, I used to play truant; I would play [games] from morning until evening. [This habit] distances you from school. It does not distance one from life though, it makes you closer to life. I mean you learn more things about life. For example, it develops social skills. I am a very unsociable person; I have difficulty in making friends. I had not had a real friend until the end of middle school. I thought computers could help me overcome this, [that] I would perhaps become more sociable by using chat because [I] feel more confident [in a chat room]. When I started high school, I made several friends. It was exactly the year that I had begun using chat. I believe it had an impact. I am more sociable compared to the past; there is a lot of difference. If I had not come to the Internet café maybe I could not even talk to you.

I believe [using Internet cafés] increased my general cultural knowledge. I learned so much; I am proud of myself. [I arrived at] a place most people cannot reach. I feel successful, more important, [and] in the upper level of society [by] doing things no one can do. I have always seen myself lower than the society [but now] I have confidence in myself because I know more than any child who sits here. [Now I] tell people about myself. They look at you with a different eye, as if you are bigger than them. [In] society, there are those who know computers and those who do not. They hire people who know computers, not those who do not. Society is split in knowledge, intellect, English, computers, everything. Leaders are those [who use computers] and others are the lower class, this is how everyone sees it. I see it that way too. I see myself in the level of those who know well. I would rather work at a computer than being a factory worker. My dream since childhood was to work with computers. I feel there is a future profession for me even if I cannot pass the university entrance test; at least I will not be unemployed. It gives me confidence. I feel ready for life, as if there are no barriers in front of me.

Structural Description of Mehmet's Experiences

For Mehmet, educational uses of computers have utility, both short and long term. He believes that as a result of his activities, he became one of the most knowledgeable individuals at that Internet café; he is sought after for his computer knowledge and skills. These skills make him feel confident and socially competent. His feelings of increased social skills are an example of perceived short-term utility. The long-term utility Mehmet perceives of his experiences is future employment security and quality. He is very confident in his knowledge and skills of computers and is optimistic about having future job security in desirable positions. He associates computers with high-status jobs and perceives himself to be a good fit for them; this reflects his feelings of superiority and entitlement as well as his imagination of a future self as a knowledgeable and worthy adult. Mehmet emphasizes that these privileges are earned self-accomplishments. Thus, all the resources he spent (time, money, even truancy) toward educational uses of computers at Internet cafés are well justified as investments in the future.

Mehmet conveys a constant desire for progress as well as an ambition for superiority and competitiveness. While he feels gratified about his social distinction, he also emphasizes a need for company. He cites the latter as his motive to teach others, but teaching others might be a way to enact his perceived superiority to others. This exemplifies his folding his accomplishments into a developing sense of self. His experiences of educational uses of computers have become a significant part of his identity. He thinks that his life would be empty without them. While attributing a high level of significance to his Internet café experiences, Mehmet feels differently about school. He supplements his formal schooling at the Internet café by learning academic topics and preparing for the university entrance test, yet he plays truant to go to the Internet café to "learn more things about life." This may reflect a view that self-education at Internet cafés enables an alternative career path.

Textural Description of Emir's Experiences

I was in fifth grade. A computer was my dream. I saw a computer game at my friend's and admired it so much. As a surprise, my father brought [a computer] home; I was very happy. We would only play games on the computer. Later, I was connecting [to] the Internet at home and visiting a few sites. My Internet café habit started in sixth grade. I was always wondering [how] they play games there together. One day we went to an Internet café. There was a 15-year age restriction then; they did not let us in. The second day, they did not let us in. The third day, I said "O brother, I wonder very much. Let me play this game with everyone." He let me in for an hour. My first experience was very nice. We would go to play games with friends. [Later I visited Web] pages that I would hear on television [and] was curious about. I started searching [the Web] on arabul.com¹¹; I also got my first e-mail account then. In seventh grade, I wanted to share with others the fun fiction stories I wrote to develop my creativity. I only had the chance to share them with a few people I was exchanging e-mails with. Someone told

me “Emir, there is chat, you can enter a room and talk to everyone interested in it.” I entered, and I was stunned.

I came up to here by myself. In middle school¹² we had a computer course, but I think there was no education, because they would teach Word, Excel, some Internet applications. Of course I knew computers better than that. For example, on mIRC [a chat program], I was a wizard; I showed users the commands they did not know. Then I started making my own amateur [Web site]. I learned important things about hardware by looking at articles on the Internet. This Internet and computers support me very much with my assignments and [learning] on other topics. Even when you search a word, millions of results come up. [Once] I was researching [for] a term paper about genetics on the Internet. There are tons of encyclopedias in our house, but none had anything about genetics; I found it on the Internet. It was my first term paper; it was the best [in class]. [On the Internet] I look at anything that gets my attention, just to learn. I can download videos of artificial insemination, microscope images of cell membrane. I even learned [about] the reproduction of ants, I was curious. Genetics is my favorite topic and biology my favorite course. Here we [I and two friends] who are interested in biology founded a [online] biology fan club. I thought of pursuing genetic engineering; I am researching if I can become a genetic engineer in Turkey. I have [online] friends interested in animations. I [also] communicate with my brother, who is studying physics at a university in [Major City] [and] I get his help [with] science and math problems. [The Internet café] gives me many benefits, [for example when] searching a topic with my friends. If I do not find [information for] my term paper, they could find or show resources. When they cannot find an assignment, I will find it. We reciprocate, we support each other. So it is like education with each other.

[My interests] change every day; I expand [them] constantly. I research a topic I am curious [about] whenever it crosses my mind. My curiosity will end [only] after 10 to 15 questions. If I would ask [these] on the streets or shops, the man [shopkeeper] would be sick; at least the computer cannot attack me. Thanks to Google, I call it “Google father.” Of course I do not believe everything [on the Internet]—for example parapsychology. I search for the origin. I do not trust amateur sites. Because computer is now [my] lifestyle, if I need to research, I research from the Internet. I usually do not read newspapers but I enter news sites and [news] portals send me e-mails. I do not have flowers at home, but I grow a cyber flower. I researched about diets and it helped; I [lost] weight. I learned about cooking omelets. Thanks to the Internet; it supports me on any matter. I translated games into Turkish, and [now] I watch CNN news, I listen to music in English online. My vocabulary capacity and pronunciation are almost very good now. I express myself [and] my imagination very well in writing. I publish my fun fiction stories and animations on the Internet. This animation culture contributed to developing my imagination. I would like to expand myself [further], I certainly cannot continue with this identity until I am 20. I would like to become a programmer. There is a need in Turkey; everyone should have learned and used computers 10 years from now. I start building the groundwork now.

[For me Internet café is] a place [to] hang out, meet my friends, [and] wait for each other comfortably without being bored. There are

chess, tea, and stuff [to do] to use time—I [read] my e-mails, download and organize my files, practice some online programs, visit [some] sites and forums, take care of my cyber flower. I enjoy [myself], I feel happy, entertained, and peaceful. [The owner] trusts and [lets us] pay later if we do not have any money. Ephesus [is] the best place because people are typically good—[apparent in their] economic status, attire, speaking style. We all have a place; we are all smart, well-behaved, well-dressed, clean kids. Vagabonds cannot enter here; they feel excluded. When they look around, it is as if the well-dressed, clean kids look down on them. [Even] if they have [money] to stay for five hours, they leave; they cannot even stay half an hour. This pleases me. The thing I like most is [that] I usually sit in this small room¹³ of mine [with] a few friends, comfortable [and] happy. There are very few [people I make friends with] in Yesildere. I do not enjoy a monotonous life. I select my friends accordingly; being interested in computers, having a wide imagination, listening to me very carefully are the most important factors for me. I elevate and develop myself [by] researching on the computer. It helps my education so much. I learned everything from the computer. I can talk [to] smart people who think like this. [My classmates] cannot think what I think, they see everything differently. I come here all the time like an addicted customer; they come less [often] but they usually play games. The computer has thousands of uses; those who see [it] as a game tool are inferior. I do not like to have conversations with those monotonous people.

Internet Café is a part of my life; it is like an organ, a life and death matter. I see it like a need; like eating, it is impossible for me to be without computers. It helped me in this way: when my parents got divorced, I almost [had] depression. I turned to computers; [they] became a source of livelihood and peace for me. The computer was like a medicine [cure]. [It] makes me forget, I begin not to care. I see there are tons of people around me—teachers, friends, my mother—they come shouting and yelling at me. As soon as I turn on the computer, it is as if a glass wall around me rises. I can see them hitting the glass, trying to make me hear their voices, but I cannot hear them. It is a completely distinct world. If my mood is zero or even negative, when I sit at the computer it will go up to 100 percent. It helps me a lot. I say “thanks to the computer,” otherwise I would lose it. Of course this is better for me. If the computer had not supported me, I would have become a vagabond; started smoking, alcohol, and drugs. I might have even stabbed someone. I would be an insecure boy. The computer increased my self-confidence. It moved me to a very high level. It made me cool, thoughtful, [and] gave an experience in everything in my life. Now I think I am 25 or so, in terms of intelligence. Computers, the Internet café distinguished me from my peers. Those who are interested [in computers] tend to be this monotonous mass. In Yesildere there is not one person like me, who does the things that I do.

Structural Description of Emir's Experiences

Emir follows his curiosity to pursue a range of interests, from academic areas to computer applications to life improvement. Exploring these interests freely helps him refine his interests and his developing self. He speaks

of himself as someone whose lifestyle is tied to computers, who is interested in the use of computers to pursue other interests and advanced applications. His current experiences and future aspirations are intertwined: he explores his interest around biology and genetics in his everyday uses of computers and considers genetic engineering as a future profession. This is a path to identity building. Emir is confident in his knowledge, his abilities to gain and use it, and the benefits it has for him. He believes that using and learning from computers has personal benefits—learning about his interests, becoming self-sufficient, relieving from problems, and avoiding potential bad habits—and collective benefits such as educating society and solving social problems. On the basis of his positive experiences with and strong attachment to computers, Emir built faith that they are universally good and have the capacity to solve any problem, if put to educational uses.

Emir describes being in an altered state when he engages with the computer and cuts contact with the outside world. His metaphor of the glass wall indicates that he lives in a society without being integrated in it. This is apparent in his physical separation from the crowds at Ephesus by sitting in a small room alone with his headphones on or with a few close friends. His using computers educationally unlike the “monotonous mass” and aspiring to become a computer programmer are two ways in which he attempts to establish his difference from others: building his current identity as an exceptional (educational) computer user and developing his future identity as a computer professional. He feels that he is superior to and more intelligent than his peers and trusts himself to become a leader rather than a follower, which gives him confidence. Indeed, his feeling of superiority and desire for detachment may be in retaliation for being rejected in the past; Emir did not have friends, because others “looked down on people with split parents.” He turned to the Internet, where people are more “frank.”

Computers have been a major remedy for Emir’s problems. Consequently, he experiences at once dependence and independence in his use of computers. On the one hand, his ability to access information and learn independently enhances his self-sufficiency and reduces his need for his parents, teachers, brother, and friends. Emir can get answers to his many questions—even on intimate or sensitive topics such as losing weight and reproduction—without being concerned about appropriateness or being a bother. Furthermore, computers prevent him from engaging in addictions such as smoking, drinking, and consuming drugs, contributing to his independence. Thus, Emir feels empowered by the computer. On the other hand, Emir’s faith in and emotional attachment to computers signals a dependency relationship; he has feelings of belonging, peace, and comfort at the Internet café. Educational use of computers is his lifestyle, a “life and death matter”; he attaches high importance to computers, substitutes them with social contacts, and believes in their far-reaching benefits. These experiences seem to have redefined Emir’s social relationships; he now depends on computers while avoiding other addictions and dependencies. The Internet café occupies a large space in Emir’s life; it even enters the domain of his formal

education, leading him to question the sufficiency of school instruction, emphasizing his ability to learn independently. This may be related less to the actual respective contributions of school and the Internet café to his education and more to his perceived fit in these environments. He feels welcome, belonging, and in harmony with the social environment of the Internet café, whereas he feels dissonance with the social environment (teachers and other students) of the school.

Textural Description of Aylin's Experiences

We had a computer [at home] for 2 years before I started going to Internet cafés. There were only some games [on it]; I would fiddle around. I have been using Internet cafés regularly for five years, [and] have accumulated great knowledge. Because [of my] interest in English, I started with games in English. I would chat with foreigners in the game. I was very interested in games that develop intelligence too. That's how it started. Later, when I met the Internet, everything fell in its place. You can find English in any form on the Internet. I [exchanged] e-mails with an e-mail pal. I was always wondering how daily talk occurs, because it is not written [in textbooks]. The best way to find out was to chat with a person from that country. I chatted with people [from the USA] and learned their daily talk; even daily writing is very different. I [also] learned a lot from comics on foreign Web sites because they reflect the culture, signs, ways of communicating, and conceptions of humor.

You first start out superficially. [Educational use] begins with playing games, [then] it is up to the individual. If one does not want to research, she cannot keep herself from games [and] will not get anything out of it. Curiosity is a must; a person without curiosity will lose time [at Internet cafés]. Also friendships at Internet cafés are very good. People can help each other and develop an exchange. I used to ask myself: how can I find different Web sites on this topic? I did not know about search engines, I would type "www" but didn't know what [to type] next. Then a friend of mine suggested search engines; I [saw] it is a mass of information, like an archive in front of my eyes. You want to reach everywhere [and] try everything. If you are a curious person, you search for more, you get interested in more things. They follow each other; this way you learn a whole lot and consequently develop yourself.

I learned [much] by always being at an Internet café. For example, I was interested in poetry and literature; I found nice writings and stories by searching. Because I am a student, everything is educational [for me]. You cannot think of anything else when you are in school. [Using] Internet cafés is helping with the university entrance test. I took practice tests and searched for resources. Internet is ideal for [locating] various resources. If there were no Internet, I would lose my time searching for stuff at libraries. Although books are arranged, it is still difficult to search because there are so many. I do not think people could expand their interests this way. Without Internet cafés, or Internet, our areas of interest would be very narrow. And we would know only about our vicinity; there would be no interaction between cultures. Your interaction with different cultures increases

[on the Internet]; you [can] learn about other cultures and be reflective [about] yours.

I have pursued other interests as well, [like] music and sports. [When] I wanted to lose weight, I learned it from the Internet. I am very interested in history [so] I was wondering how to [obtain] a tourist guide certificate. Just by reading the information on [the Internet], I learned [about the procedure] and started preparing to get the tourist guide certification. Also, I practiced various programs like Word, Excel, and Photoshop. I learned the basics, in case I need to use them in the future. It was very enjoyable. I would like to learn all of the software packages. I want to be a person who is good at computers. I want to become an English teacher, I believe it will contribute to my [profession] too. I am sure it will contribute to every area of my life; I just need to learn and it will help.

[Internet café helps] my development. For example, I am interested in writing, [but] I needed help with put[ting] it on paper. I learned [from the Internet about experiences of] successful authors [who] initially could not write [because] they were afraid of making mistakes. Now I can write; I realized my hidden writing skills. I believe my imagination has developed, my perspective expanded, and my self-confidence increased. I discovered my aptitudes and what I can do; I gained a wide perspective [in] thought, worldview, emotion; I [became] more mature and conscientious. I was shocked when I saw pictures of starving people in Africa; seeing how hungry some people are and how much some countries consume is emotional development.

Research [and] learning on the Internet enhances participation in society. If you have accumulated information, you can have a say everywhere; it means power, [and] your self-confidence increases. What if you did not search, wonder about things? In order for you to comment on a topic in a social group, you need to have knowledge. The simplest, easiest, and fastest way to develop yourself is [by using] Internet cafés; you can find one in every corner. At Internet cafés, as an individual you have the right [and] the ability to make choices. One understands that she can direct her own life, your confidence increases as you learn. For me, Internet café means a place like school, another institution that educates me. Unlike at school, there is no one to tell you “you are to learn this, you are to do that” as a teacher imposes on you. The Internet café provided me the opportunity to choose [my] education. You can become an individual [and] establish your difference from others. I am going through a transition now [from being taught to learning] because there will not always be someone to teach me. [My experiences] mean maturation in every sense.

Structural Description of Aylin's Experiences

Aylin's description reflects a consciousness of learning in several domains: academic (linguistic and writing skills), everyday knowledge (nutrition), adult learning (exploring careers), as well as development (emotional development, multicultural awareness). She masters computer skills incidentally and purposefully. Her curiosity and beliefs about computers seem to guide her experiences. Aylin considers curiosity essential to learning and attributes her

sustained curiosity to having made positive learning experiences. It seems these experiences enabled her to discover her skills, to identify her interests, and to project these onto potential future professions. Aylin has two major beliefs. First, she believes that her way of using computers at Internet cafés makes her knowledgeable in many areas. She observes progress of becoming knowledgeable and cultured in her ability to converse with others on a range of topics, which makes her feel respected, powerful, and thus confident. Second, she believes that computer skills will be useful for her in the future. Accordingly, she is optimistic about materializing her image of her future self as “a person who is good at computers,” a mature adult, and a teacher. Powered by her optimism, she is vested in fulfilling that future self. She appears to take more responsibility for her education as she nears graduation from high school; using computers at Internet cafés educationally serves that purpose well. As part of the transition from being an adolescent to becoming an adult, she emphasizes her freedom to choose what to learn and to identify her interests. She feels ready to assume the role and responsibility of an independent adult learner. She is glad to establish her difference from others, thereby asserting her identity. She perceives this transition as maturation and emancipation from the authority of schooling.

Textural-Structural Synthesis: The Essence of the Experience

The following synthesis describes the essence of the experience of the phenomenon of adolescents' educational uses of computers at Internet cafés in Turkey. It explains how the essential structural elements underlie the various manifestations of the experience. This textural-structural synthesis represents the essence at a particular time and place, as manifested in the participants' experiences, as seen from the perspective of an individual researcher as a result of an intuitive and reflective study of the phenomenon (Moustakas, 1994).

The essence of the experience of the phenomenon of educational uses of computers at Internet cafés for these adolescents is building identities as educational computer users, which distinguish them from those who do not use computers educationally, through engaging in activities they perceive to have current utility or anticipate to have future utility, in an environment that gives them control over their experiences through its structure that is essentially unlike school. Thus, three interrelated structural elements constitute the essence of the experience of the phenomenon: building an identity linked to aspects of the experience, experiencing current and anticipating future utility of educational computer use, and contrasting Internet café experiences to formal schooling. I describe these elements essential to the experience of the phenomenon below.

Identity building. For the participants, the experience of the phenomenon is closely related to identity building. Identities are built and communicated in relation to prominence and ways of computer use, comparison of oneself with

others, and future aspirations. Experiences of the phenomenon are profound; association with Internet cafés is vital—"like an organ," (Emir), "my third eye" (Leyla), "a bond that ties me to life" (Leyla)—constituting a habit, routine, need, or "addiction" (Mehmet, Emir). Indeed, connection to the body is an identity statement. It seems that these adolescents have so internalized their experiences that they ascribe physical connection to them. Without them, they would be crippled; they would feel "as if my arms were taken off . . . as if I did not have arms or legs (Amber), "not sufficient" (Deniz), that "there would be a large void in my life" (Mehmet). However, it is not just computer use that is important; participants' ways of using computers (educationally) make up an important aspect of their identity building. These adolescents define themselves as individuals who use computers regularly in ways that educate and develop their selves, who are experts in using computers and accessing information, who use their free time for intellectual ventures at Internet cafés, who belong to a distinguished group that is knowledgeable and cultured.

In particular, participants believe that they became learned, cultured, and sophisticated individuals through using computers at Internet cafés. Those who use computers and the Internet "like those who read books [can] become knowledgeable" (Deniz). The availability of information and the facility of accessing it, going beyond the sphere of knowledgeable others in their social circles (outside the Internet café), can be empowering. It can make one feel "cool, thoughtful" (Emir), knowledgeable, cultured—only through certain uses of computers. These adolescents use the versatility and power of computers to "learn" (Mehmet, Emir, Amber), "develop myself" (Deniz, Amber, Emir), "do my work" (Emir), "research" (Aylin, Emir), "enhance my culture and knowledge" (Deniz), "increase my intellect" (Amber), and "expand my worldview" (Leyla), not "just to play games" (Deniz). Playing games is history, it happens when one is "not very knowledgeable" (Deniz) yet; going to Internet cafés to play games is a "transition period" (Mehmet). These adolescents ascribe some elitism to educational uses of computers. For them, playing games is elementary and passé, those who see the computer "as a game tool are inferior" (Emir) and "superficial" (Aylin), whereas educational computer users feel "superior," "elevate[d]" (Emir), "privileged" (Amber), and exceptional. Participants prefer to dissociate themselves from games and those who play games, to "establish your difference" (Aylin) from other users of Internet cafés. This way they can separate from the "monotonous mass" (Emir) and "become an individual" (Aylin). Distinction from others is an important part of becoming an individual and building an identity. Also, games belong to childhood, whereas these adolescents are "building the groundwork" for the future (Emir), feeling "mature" (Aylin, Amber, Deniz) and "ready for life" (Mehmet). They have future aspirations: to become college-educated professionals (e.g., genetic engineer, computer engineer, English teacher), professionals in computer-related positions not requiring college degrees (e.g., computer programmer, hardware specialist, digital designer), and computer-savvy and cultured adults. The present experiences of the phenomenon are located between elementary uses of computers in the

past and an image of the self as a sophisticated computer user in the future. Central to the experience of building an identity is the perception of making progress from the past to the present and into the projected future. Although these participants are on a progressive trajectory, those who underuse computers by “unconsciously play[ing] games” (Deniz) or “chatting for 8 hours” (Deniz) do not make progress, they will “have to depend on games” (Amber). “They won’t get anything out of it” (Aylin), missing out on the potential advantages of educational uses of computers.

Experiencing and anticipating utility. The experience of the phenomenon is also closely related to experiencing current and anticipating future utility. Participants experience current utility in the form of respect and meeting like-minded people as well as in feelings of maturity, distinction, prestige, and sophistication, which in turn increase their self-confidence. Knowledge, manners, and social skills acquired at Internet cafés can be displayed in social situations, functioning as a currency to generate social returns such as respect and connections. It can afford them “the benefit of being able to talk to people” (Leyla), and consequently “your self-confidence will increase” (Aylin). “Friends and grown-ups ask for help. When I can help them . . . I am pleased. . . . Then you have prestige, as you help people, and get a social environment” (Deniz). Seeing themselves as central knowledgeable figures in the Internet café’s social environment is a token of pride and self-confidence.

Future utility is anticipated because of the potential of acquired knowledge and skills to increase prospects of future employment, enhance facility in future jobs, and lead to high test scores, which enables college admission. Participants’ anticipation of these utilities is linked to strong beliefs in the positive effects of educational uses of computers: that they will provide skills that will be necessary in the future, that they can make one cultured, that they will solve individual and/or social problems. Accordingly, educational uses of computers are an investment for the future for participants; some make this investment intentionally, for example, by learning computer applications (Aylin, Deniz, and Mehmet), while others expect their regular experiences will return utility (Emir, Amber, Leyla).

Contrasting Internet cafés with school. Participants make sense of their experiences of educational computer use at Internet cafés by contrasting them with their experiences in school. This contrast results in three qualities of the experiences at Internet cafés in relation to schooling. First, experiences of educational uses of computers at Internet cafés are seen as *supplementing* schoolwork, by completing school assignments, preparing for the university entrance test, further exploring academic interests (history, genetics, programming), and establishing academic initiatives (biology fan club). Second, these experiences are seen as helping overcome restraints of schooling, thus *complementing* school education, by exploring areas not covered in school (e.g., nutrition [Emir, Aylin]), pursuing lifelong skills school may

not address (e.g., sociability [Mehmet], multicultural awareness [Aylin], expanded worldview [Leyla]), making up for what is seen as insufficient (e.g., knowing more than “Word, Excel” [Emir], staying abreast of developments in technology [Deniz]). Third, these experiences are seen as *competing with* formal educational organizations. As participants see utilities of their experiences at Internet cafés, they compare these functions with those of schooling, at times treating them as alternative means to their goals (e.g., secure employment). An Internet café is “an educational venue, just like school” (Deniz), it is “very important. . . . It comes right after school. Sometimes it can be equivalent to school” (Amber).

The content of school subjects appears agreeable to these adolescents; it is the structure and authority of schooling that they seem to harbor resentment against. Internet café “does not limit me” (Amber), it does not have “rules [or] things that restrict you” (Leyla). Consequently, they challenge the dominance of formal schooling. For them, Internet cafés are another place for education; “unlike at school, there is no one to tell you you are to learn this, you are to do that” (Aylin). “Education does not only take place in school . . . we cannot call a person uneducated or illiterate because he did not go to school” (Leyla). Along with considering alternative paths to education comes the responsibility over their own education; education is “not limited to school and the teachers . . . [it] is up to the individual to develop himself” (Deniz), because “there will not always be someone to teach me” (Aylin).

Discussion

Computer Games as a Stepping-Stone

An important insight from the present study is that initial experiences at Internet cafés with playing games are a shared textural element of the experience; this suggests that games had an *intermediary* function in the path of developing from nonusers into educational users of computers. This is consistent with Clark’s (2003) finding that initial experiences with computers focus on games and entertainment. Indeed, Selwyn (1998, 2005) found that sustained interest in learning and computer use can be traced back to earlier computer game play. Therefore, apart from learning advantages derived from playing computer games, such as increased visual skills (Subrahmanyam et al., 2000) and problem-solving skills (Pillay, 2003), experience with playing computer games may be an important ingredient in adolescents’ development of educational uses of computers in informal social contexts.

Internet Cafés as Sites for Communities of Practice

Internet cafés as third places allow people to build sustained relationships around the common interest of computer use. A major purpose for adolescents’ patronage of Internet cafés is to make friends and socialize (Bolukbas, 2003; Laegran, 2002; Sairosse & Mutula, 2004). According to their descriptions, participants’ experiences with the phenomenon, including their

history, are shaped by and interrelated with their participation in the social context of Internet cafés. They indicated that they learned and developed their intellect “by always being at an Internet café” (Aylin) around like-minded people and by aspiring role models and more capable peers. Deniz stated,

When I began going to Internet cafés, when I was 12 or so, I only came to play games. I saw that some people older than I were doing things like [Web design] I thought they were cool things. . . . I admired them. . . . They did not tell me [what to do, but] I would observe them. . . . I said, why not, I can also do these things.

Mehmet indicated teaching others at the Internet café in order to have people to interact with.

Although adolescents and young adults dominate Internet cafés in Turkey, patrons come from a wide range of ages, levels of education, and occupations (Bolukbas, 2003). Diversity of individuals in knowledge, skills, and interests is a major resource for learning in social settings (Lave & Wenger, 1991; Sawchuk, 2003). Additionally, such settings are ideal for fulfilling adolescents' need to exchange ideas with nonfamilial adults (Eccles, 1999). At Internet cafés, other customers are peers who may serve as “the more capable peer” (Vygotsky, 1978, p. 86) to adolescents. The studied adolescents indicated the existence of impromptu teaching and observation at Internet cafés as well as learning from others about possible computer uses (e.g., Aylin's learning about search engines, Emir's learning about chat rooms about fiction writing, and Leyla's learning about e-mail when her friend casually said “my mailbox is full”). Thus, they were socialized and assimilated into the practice of educational uses of computers.

Similar to Sawchuk's (2003) finding regarding adults' experiences of learning how to use computers in their everyday lives, this process of modeling and learning in a social setting at Internet cafés can be explained by the concept of legitimate peripheral participation; it is a process by which novices or newcomers become part of a community of practice by gradually moving from peripheral participation in the sociocultural activities of the community to a more central participation in them (Lave & Wenger, 1991). The results of this study suggest the existence of communities of practice of educational users of computers at Internet cafés; participants' descriptions of their experiences pointed to three aspects that characterize a community of practice: mutual engagement, joint enterprise, and shared repertoire (Wenger, 1999). *Mutual engagement* is demonstrated by regularly attending an Internet café, by conversing and interacting while engaging in computer activities, as well as by articulating reputation and identity in relation to others. Examples of mutual engagement include Leyla's writing e-mails together with her friends, acquaintances' and grown-ups' going to Deniz for help at the Internet café, and Mehmet's and Deniz's considering themselves the most skilled in certain applications at their Internet café. *Joint enterprise* is demonstrated by developing meaning and criteria and judging experiences by tastes and criteria of the community. Participants'

seeing utility in their practice, associating their experiences with progress, and (negative) judgments and evaluation of those who play computer games are examples of a joint enterprise. *Shared repertoire* is demonstrated by history, routines, and ways of doing things. Examples of shared repertoire include the habit of Emir and his friends to sit together in the same place every time; Deniz, Mehmet, and their friends' common knowledge of highly advanced computer applications; and Amber and Emir's expectation to see each other and habit of waiting for each other at the Internet café before school.

Internet Cafés as Contexts for Identity Building

Adolescence is a time of strong attachment to causes and peers (Eccles, 1999; Erikson, 1968), and "a computer center or a computer club can become the focus of their [adolescents'] social life" (Turkle, 1984, p. 138). Computer expertise is a means by which adolescents build their identities within their peer group cultures (Facer et al., 2001; Turkle, 1984). Learning (with computers) can also serve as a specific interest for adolescents, with which to build an individual identity with related future aspirations (Krapp, 2002).

According to the findings of this study, identity building is an essential component of the experience of educational uses of computers at Internet cafés for adolescents. The informal learning environments constituted by Internet cafés enable access to a range of "examples of the types of people that it is possible for participants . . . to become" (Hull & Greeno, 2006, p. 83) as well as opportunities for adolescents to practice and experience identities they imagine. Participants' descriptions of their experiences reflected all three aspects of identity as conceptualized by Hull and Greeno (2006): interpersonal, epistemic, and discursal. *Interpersonal identity* refers to identity in relation to others, such as the image of the self as a valued social participant. This aspect of identity was present in participants' comparisons of themselves with others and affiliations with a (peer) group. Being sought after and/or respected by peers and others at Internet cafés, being superior to game players, being privileged in comparison with those who did not use computers were among the arguments by which participants made sense of and experienced their identities interpersonally. *Epistemic identity* is defined as identity regarding a person's increasing expertise and understanding, such as a valued sense of self as a knowledgeable participant in the community. This was present in these adolescents' references to being educational users of computers. For example, they reported learning and gaining knowledge in intellectual domains, academic topics, and computer skills as well as building social skills through their experiences at Internet cafés. Participants built their senses of self as knowledgeable individuals with associated feelings of being sophisticated, prestigious, exceptional, distinguished, mature, and superior. *Discursal identity* is identity as narrated in stories about the selves we were, are, want to become, and imagine it possible to be. Participants' descriptions of their experiences contained their past selves as game players and novices to the world of computers; their current selves as educational

computer users, for whom it is a lifestyle or necessity to use computers in this way; and their imagined and desired future selves as educated professionals, cultured adults, and computer experts.

Wenger (1999) pointed to the role of communities of practice in supporting identity building. Adolescents in this study expressed signs of belonging to a community of practice of educational users of computers, while openly dissociating themselves from game players; indicating that they used to play games in the past, they emphasized that they no longer do so. They belittled games as useless and regular game players as inferior, boring, or unable to make progress. No longer being a game player appears to be an important part of building an identity as an educational computer user. We build our identities through the practices we engage in as well as those we do not engage in (Wenger, 1999). Thus, dissociating from one form of computer use (games) serves the same purpose as associating with another (educational uses): identity building (Turkle, 1984; Wenger, 1999).

As a matter of fact, adolescence is an important period of identity building; experiences in this period can have far-reaching influence in a person's life (Erikson, 1968; Verma & Larson, 2003). Developing a sense of one's social location, reflecting on one's own competence and knowledge (and resulting self-confidence), and imagining and committing to future careers are major tasks of identity building for adolescents (Erikson, 1968). These three tasks correspond to the three aspects of identity (i.e., interpersonal, epistemic, and discursal, respectively) demonstrated by the adolescents in this study in relation to their experiences of the phenomenon. These results suggest that Internet cafés are important places for these adolescents' accomplishment of a significant developmental pursuit (the development of identity); they may facilitate this development by providing for adolescents the templates (i.e., role models) to envision potential identities as well as by making it possible to exercise those imagined identities. To sum up, Internet cafés provide adolescents with an extended repertoire of identities (Laegran, 2002) and a leisure environment where adolescents are afforded the choice of activity, thus potentially contributing to their identity development, particularly as it relates to success, social location, peer associations around shared interests, and future aspirations (Eccles & Barber, 1999).

The Charm of Internet Cafés as Educational Contexts

Informal and formal learning environments have differing purposes, features, and outcomes; both are essential for the development of well-rounded adults with competencies in various aspects of their lives (Resnick, 1987). Participants interpreted their experiences of educational uses of computers at Internet cafés by relating them to their formal education, pointing to their experiences of functions of Internet cafés as supplementing, complementing, and competing with formal educational organizations. Furthermore, they considered the informal learning environments of Internet cafés to be

more aligned with their developing selves as self-directed learners and mature and autonomous individuals, contrasting them to the structure and authority in school, which they perceived to be limiting.

Schools and similarly structured learning environments may be experienced by adolescents as being at odds with their learning and development needs (Bekerman et al., 2006; Halpern, 2002; Zhao, Mishra, et al., 2000); even home may not afford sufficient opportunities for freedom and exploration (Sutherland et al., 2000). A mismatch between these structures and adolescents' desire for more autonomy and independence may cause tensions and conflicts (Bruce & Bruce, 2000), reducing adolescents' interest and motivation (Liu et al., 2002) and increasing their propensity to develop negative views of these settings (Eccles, 1999). It is perhaps for this reason that adolescents prefer social settings, peer groups, and other informal learning environments outside home to formal and organized activities (Eccles, 1999; Heath, 2001), just as Internet cafés were the preferred educational settings for adolescents in this study.

Learning in informal environments—in the presence of self-control and autonomy and the absence of structure, adult control, and supervision—can be as effective as it is in formal settings (Illich, 1971; Resnick, 1987). Indeed, some of the experiences of the participants in this informal learning context fall into areas determined essential to healthy youth development (Dierking & Falk, 2003) and are more likely to occur in informal settings (Dewey, 1938; Illich, 1971; Reed & Loughran, 1984). Furthermore, informal learning environments may provide adolescents with specific benefits, such as the development of creativity and expression, exposure to multiple perspectives and diversity, and the development of identity (Eccles & Barber, 1999; Heath, 2001; Nocon & Cole, 2006; Smith, 2006; Vadeboncoeur, 2006), provided that adolescents are given choices and autonomy as well as opportunities for discussion and interaction (Eccles & Barber, 1999; Hall & Israel, 2004). The results of this study suggest that Internet cafés provide such a context.

Limitations of the Study

The requirement to obtain parental or guardian consent for participation in this study limited the participant pool to adolescents whose parents knew and approved of their attending Internet cafés. There are adolescents who use Internet cafés without the knowledge and/or consent of their parents. It would have been informative to explore the experiences of those adolescents as well, because parental involvement may affect and contribute to particular experiences. Another limitation of the study was the need to translate the interview data. Because adolescents living in Turkey had limited English-speaking skills, in-depth phenomenological interviews could not be conducted in English. Thus, I conducted the interviews in Turkish, translated them, and had them verified by a second person; this study could not have been conducted otherwise.

Delimitations of This Study and Suggestions for Further Research

Representativeness of participants. This study focused on the experiences of adolescents who used computers educationally at Internet cafés. On the basis of the purpose of the study and consistent with the phenomenological framework, generalization of the findings and the degree to which participants are representative of the general population of adolescents was not a concern (Creswell, 2007; Seidman, 1991; van Manen, 1990). Indeed, a relatively homogeneous group of participants was sought to identify the essence of the experiences of this group and describe it in depth (Creswell, 2007). Only some information about the participants—such as their ages, locations of computer access, and length of time of using Internet cafés—was collected to understand their experiences better. Neither this information nor the literature on Internet cafés in Turkey allows the judging of participants' representativeness, particularly in terms of the way they use computers at Internet cafés. Participants stated that they are a minority among adolescents and the Internet café clientele in their use of computers, but empirical verification of this point was beyond the purpose of this study. Future research should consider focusing on the range of experiences adolescents have at Internet cafés.

Process of development of educational uses of computers. Although the results of this study indicate that playing computer games may be an important ingredient in the development of adolescents' educational computer uses at Internet cafés, I did not investigate actual practices of computer use, how the process of transition from games to educational uses may occur, or how other ingredients, coupled with experiences of playing games, may contribute to becoming an educational computer user. Understanding the role of playing computer games and the process of developing educational uses of computers may have important implications for designing learning environments and interventions for the benefit of adolescents; thus, these would be important areas for future research to pursue.

Implications

Although Internet cafés are specific contexts, they are instances of informal learning environments. Therefore, the implications of this study may apply to other informal learning environments sharing contextual characteristics with Internet cafés (i.e., affording a third-place type of sociability combined with minimal levels of structure, authority, and supervision). As discussed in the "Methods" section, from the vantage point of phenomenology, it is ultimately up to readers to make connections to their own experiences and judge the applicability of the results of this study to their empirical settings of interest.

This study focused on the experiences of adolescents who use computers *educationally* at Internet cafés. As such, the results have implications for promoting educational uses of computers at Internet cafés and in other informal learning environments. Understanding adolescents' experiences and meanings

of educational computer use may help educators, policy makers, and researchers design interventions and steer adolescents toward uses of computers deemed desirable. In Turkey and in other countries where Internet cafés are prevalent, many adolescents use them regularly; at the same time, resources are often scarce, and many adolescents have only limited access to computers in schools and at home. In these contexts, teachers at high schools may be able to capitalize on existing resources outside of schools and homes, most notably at Internet cafés, by giving students information about how to better use these resources. They may offer information sessions or theoretical courses that require only one or even no computer at all, to instruct students on topics including conducting Internet searches, obtaining career related information, available mailing lists and chat rooms on academic interests, and learning how to use specific computer applications. Similarly, state and/or local authorities may require Internet cafés to make available for patrons information sheets on how to accomplish certain computer tasks or containing lists of useful Web sites, thus potentially stimulating educational experiences of using computers at Internet cafés.

This study suggests that adolescents may choose educational experiences in leisure settings when afforded free exploration and virtually full autonomy. Their experiences may lead to important developmental outcomes such as recognizing, identifying, and pursuing their own interests as well as exploring future paths, thus contributing to their identity development. The findings of this study suggest further that coalescence of computer use and socializing may have additional advantages for adolescents such as benefiting from positive peer influence and participating in an educational community of practice. However, such benefits may fade away in formal as well as highly structured nonformal learning environments (Bruce & Bruce, 2000; Eccles, 1999; Liu et al., 2002). Therefore, organizations that operate nonformal learning environments, such as after-school computer programs, should consider providing reduced structure and authority and higher independence and autonomy for adolescents, like Internet cafés providing mere access to computers, rather than being an extension of school.

In the United States, third places such as the Internet cafés investigated in this study are scarce (Oldenburg, 1999), so using computers and socializing are usually separate activities competing for adolescents' time (Roberts et al., 2004; Subrahmanyam et al., 2001). This raises concerns about the impact of computer use on adolescents' social relationships and psychological well-being (Subrahmanyam et al., 2001). Thus, policy makers and local governments may consider operating, funding, or subsidizing Internet cafés or computer-based learning environments that are similar to Internet cafés in structure, as is done in Finland (Uotinen, 2003) and Norway (Laegran & Stewart, 2003). Accordingly, future research in the United States, and other countries where third places are rare, should consider examining the effects of adolescents' use of computers in these settings. In so doing, researchers should consider designs that allow for the inclusion of outcomes that may be characteristic of informal learning environments.

Finally, interventions into informal learning environments should consider not increasing their structure, thereby formalizing the environment. The findings of this study imply, consistent with previous literature (Eccles, 1999; Nocon & Cole, 2006), that the formalization of informal learning environments may have disadvantages. Instead, this study pronounces the importance of social context and positive peer influence in choosing educational uses of computers. As one participant indicated, for educational uses of computers to flourish, "there must be a social context. . . . Someone at an Internet café can learn useful things because there are people he can model . . . and admire. . . . Admiration is a major factor I believe" (Deniz). Interest in education and identity as a learner are fostered in social relationships and communities (Crick & Wilson, 2005; Greenfield & Lave, 1982) and can affect how effectively existing resources are used to facilitate learning (Barton et al., 2008). Fostering learning-related identities may evoke *educational* uses of computers in social settings in which computers are available. As a result, policy makers interested in steering adolescents toward educational uses of computers should consider promoting an adolescent culture in which educational computer use is desirable. The promotion of role models on television, in teen magazines, on the Internet, at school, and in teen hangout places such as malls may inspire adolescents to use computers educationally in leisure contexts.

Appendix A

Subjectivity Statement

I am a young Turkish woman, who was born and raised in western Turkey. My family placed much emphasis on education. Throughout my education, and particularly as an adolescent, I was fortunate to have ample access to resources such as libraries, foreign-language labs, science labs, computer labs, and sports facilities at school. In college, I also had a home computer; by the time I graduated from college, I was a proficient computer user. Even though I have experiences with different activities on the computer, I have been primarily an instrumental user. In other words, I have not regularly played games, chatted, or entertained myself on the computer, but I have used computers mainly to search for specific information and to do assignments. Currently, I use computers for doing work, collecting information, and communicating with friends.

During my adolescence, Internet cafés were yet unknown in Turkey, and later I used them rarely to check e-mail while traveling. However, in my adult life, I became familiar with people who were "regulars" at Internet cafés or other public access points. Some were not good in school but were considered computer geniuses in their peer groups. They proved to me that even playing multiuser domain role-playing games could help one gain important skills, that being in a community of computer users can be very useful, and that one could learn to use computers in creative ways if he or she had enough exposure to them. Some of those people eventually made careers out of their unique computer skills, leading me to see how computers could be means for economic opportunity and upward social mobility.

(continued)

Appendix A (continued)

My perception of educational uses of computers is broad and general. I believe that anything that contributes to one's learning, education, and development (mental, physical, and emotional) is an educational use of computers. This includes learning content matter, practical skills (e.g., cooking), emotional skills (e.g., conflict resolution), social skills (e.g., table manners), intellectual development (e.g., scientific developments, current events), and information technology skills (e.g., programming, e-mailing, and graphics design). It is with this background and beliefs that I investigated the phenomenon of adolescents' educational uses of computers at Internet cafés. I made every effort to keep these beliefs aside (i.e., bracket them) throughout the study.

Appendix B
Participants

The following information is based on the participants' responses to the background information survey administered prior to the interviews.

Emir is a 16-year-old male ninth grade student. He owns a computer with Internet access. He uses the Internet café (Ephesus) for 2 to 3 hours every day and has done so for the past 5 years. He considers himself an advanced computer user. His parents are divorced; Emir lives with his single father but frequently visits his mother, who lives in the same city.

Amber is a 17-year-old female 10th grade student. She is Emir's close friend. She does not own a computer, but she can use the family computer at home or the one at her father's business. Everyone in her family uses computers. She uses the Internet café (Ephesus) for about 2 hours every day and has done so for 7 years. She considers herself an advanced computer user.

Mehmet is an 18-year-old male 11th grade student. He is Amber's brother and knows Emir too. He does not own a computer, but he can use the family computer at home, the one at his father's business, or the computers at school. Everyone in his family uses computers. He uses the Internet café (usually Ephesus) for 3 hours every day. He considers himself a "super" computer user.

Aylin is an 18-year-old female 11th grade student. She is preparing to study English in college. She owns a computer and can also use the one at her parents' shop. Her father also uses computers. She uses the Internet café (Cappadocia) for 4 to 5 hours a week and has done so for the past 5 years. She thinks that she is good at computers.

Leyla is an 18-year-old female 11th grade student. She is Aylin's friend. She is also preparing to study English in college. She does not own a computer but can use one at school. She uses the Internet café (Cappadocia) for 4 to 6 hours a week. She considers herself an average computer user.

Deniz is a 17-year-old male 11th grade student at a vocational school in the computer hardware area. He owns a computer, but he does not have Internet access at home. He also has ample access to computers at school. His younger brother also uses computers. Deniz uses Internet cafés (mostly Ephesus and Cappadocia) for 3 hours every day and has done so for the last 5 years. He thinks that his computer skills are "enough" but can be developed further.

Appendix C

Interview Guide

The first two interviews were semistructured. While the questions in the interview guide were used to provide a structure, the interviews were customized according to each participant's responses and the flow of the interview. The third interview was unstructured (Kvale, 1996), with no preset questions.

Interview 1

- Tell me about your experiences of educational uses of computers at Internet cafés. What kinds of educational activities do you engage in on the computer?
- How did you learn about Internet cafés? How did you start going to Internet cafés?
- How did you start using computers at Internet cafés? How did you come to use computers in this way?
- Describe some purposes of using computers for education at the Internet café.
- Is there anything you would like to add?

Interview 2

- Revisiting the first interview; new questions that arose.
- Tell me about your educational experiences of using computers at Internet cafés that stand out for you. How do you feel about them (those experiences that stand out for you)?
- What does using computers (in this way) at Internet cafés mean for you? How important is using computers (in this way) at Internet cafés for you?
- How has using computers (in this way) at Internet cafés changed you or your life? How do you feel about this change?
- Is there anything you would like to add?

Interview 3

- Discussion and participants' feedback and clarification on my preliminary findings and interpretations of the first two interviews (member check).
 - New questions that arose on the basis of the first two interviews.
 - Any additional thoughts or opinions participants might have.
 - Further reflections on the meaning and significance of experiences.
-

Notes

I thank Thomas Greckhamer for his thorough reviews and valuable comments on earlier drafts of this article. I am grateful to Associate Editor Patricia Alexander and anonymous reviewers of the *American Educational Research Journal* for their detailed and constructive comments on earlier drafts of this article.

¹Turkey is one such country, accommodating almost 19,000 Internet cafés in 2006 (Intel Corporation, 2006); more than 41% of Internet users in the country access it at Internet cafés (Turkey State Statistics Institute, 2004). Adolescents constitute approximately half of Internet café users in the country (Bolukbas, 2003).

²Some literature uses the terms *informal*, *nonformal*, and *out-of-school* synonymously to refer to the negation of schooling (e.g., Dierking & Falk, 2003; Heath, 2001;

Resnick, 1987). However, I follow a distinction between nonformal and informal education (Smith, 2006) because the dichotomous formulation of in- and out-of-school environments does not fully capture the emphasis on the importance of context (Bekerman, Burbules, & Silberman-Keller, 2006; Vadeboncoeur, 2006) on which this study focused. Vadeboncoeur (2006) referred to nonformal learning environments such as after-school programs as "structured informal" (p. 240).

³While they may be called informal learning environments in the original literature, according to the framework used in this article, they are nonformal learning environments.

⁴See, for example, The Cybercafe Search Engine (<http://cybercaptive.com>) for a list.

⁵Similarly, Michaels (1993) found video game parlors to be a place for adolescents to meet old friends and make new ones, with teens entering and leaving in groups as well as continuing their interactions through cooperative and competitive game play or normal conversation during game play.

⁶The length of instruction at vocational schools and English-medium schools (such as Anatolian High Schools), which admit on the basis of centralized aptitude test scores, is 4 years; at all other high schools, it is 3 years.

⁷Internet cafés are prohibited from operating near schools and mosques.

⁸Forty-eight percent of Internet café users in Turkey are between the ages of 16 and 20 (Bolukbas, 2003).

⁹Each profile is written in the participant's voice, rearranging his or her statements to form a coherent narrative. Some sentences in the profile are a combination of two or three clauses or phrases. I do not indicate the breaks or combination points in the text so as not to interrupt flow. Occasionally, I changed word order within a sentence to maintain correct grammar and sentence structure, paying attention to preserving the meaning of the original statements and context.

¹⁰Anatolian High Schools (one of which Mehmet attended) are highly selective public schools with English as the medium of instruction; German as a foreign language is often part of the curriculum.

¹¹Arabul.com is a Turkish search engine.

¹²Middle school covers Grades 6 to 8 in Turkey.

¹³Ephesus (the Internet café Emir uses regularly) is organized into rooms. He and his good friends usually sit in the same place in a small room with three computers.

References

- American Educational Research Association. (2006). Standards for reporting on empirical social science research in AERA publications. *Educational Researcher*, 35(6), 33–40.
- Akbaba-Altun, S. (2006). Complexity of integrating computer technologies into education in Turkey. *Educational Technology & Society*, 9(1), 176–187.
- Alexander, P., & Wade, S. (2000). Contexts that promote interest, self-determination, and learning: Lasting impressions and lingering questions. *Computers in Human Behavior*, 16, 349–358.
- Altintas, K., Aydin, T., & Akman, V. (2002). Censoring the Internet: The situation in Turkey. *First Monday*, 7(6). Available at http://www.firstmonday.org/issues/issue7_6/altinta/index.html
- Ashworth, P. (1999). "Bracketing" in phenomenology: Renouncing assumptions in hearing about student cheating. *International Journal of Qualitative Studies in Education*, 12(6), 707–721.
- Attewell, P., & Battle, J. (1999). Home computers and school performance. *The Information Society*, 15(1), 1–10.
- Audi, R. (Ed.). (2001). *The Cambridge dictionary of philosophy* (2nd ed.). New York: Cambridge University Press.
- Barton, A. C., Tan, E., & Rivet, A. (2008). Creating hybrid spaces for engaging school science among urban middle school girls. *American Educational Research Journal*, 45, 68–103.

- Bayram, S., & Seels, B. (1997). The utilization of instructional technology in Turkey. *Educational Technology Research and Development*, 45(1), 112–121.
- Becker, H. J. (2000). Who's wired and who's not: Children's access to and use of computer technology. *Future of Children: Children and Computer Technology*, 10(2), 44–75.
- Bekerman, Z., Burbules, N., & Silberman-Keller, D. (Eds.). (2006). *Learning in places: The informal education reader*. New York: Peter Lang.
- Beyer, C. (2004). Edmund Husserl. In E. N. Zalta (Ed.), *The Stanford encyclopedia of philosophy*. Retrieved February 8, 2007, from <http://plato.stanford.edu/archives/fall2004/entries/husserl/>
- Blanton, W. E., Moorman, G. B., Hayes, B. A., & Warner, M. L. (1997). Effects of participation in the fifth dimension on far transfer. *Journal of Educational Computing Research*, 16(4), 371–396.
- Bolukbas, K. (2003, April 18). *Internet cafelere sosyolojik bir yaklasim* [A sociological approach to Internet cafés]. Paper presented at the Internet and Society Symposium, Diyarbakir, Turkey.
- Brown, J. S., Collins, A., & Duguid, P. (1989, January-February). Situated cognition and the culture of learning. *Educational Researcher*, pp. 32–42.
- Bruce, S. P., & Bruce, B. C. (2000). Constructing images of science: People, technologies, and practices. *Computers in Human Behavior*, 16, 241–256.
- Central Intelligence Agency. (2008, March 20). Turkey. In *The world factbook*. Retrieved March 28, 2008, from <https://www.cia.gov/library/publications/the-world-factbook/geos/tu.html>
- Clark, K. (2003). Using self-directed learning communities to bridge the digital divide. *British Journal of Educational Technology*, 34(5), 663–665.
- Clark, K. (2006). Practices for the use of technology in high schools: A Delphi study. *Journal of Technology and Teacher Education*, 14(3), 481–499.
- Cole, M. (1996). *Cultural psychology: A once and future discipline*. Cambridge, MA: Belknap.
- Cradler, J. (1994). *Summary of current research and evaluation findings on technology in education*. San Francisco, CA: Far West Laboratory.
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.). Thousand Oaks, CA: Sage.
- Crick, R. D., & Wilson, K. (2005). Being a learner: A virtue for the 21st century. *British Journal of Educational Studies*, 53(3), 359–374.
- Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. London: Sage Ltd.
- Cuban, L. (1993). Computers meet classroom: Classroom wins. *Teachers College Record*, 95(2), 185–210.
- Cuban, L., Kirkpatrick, H., & Peck, C. (2001). High access and low use of technologies in high school classrooms: Explaining an apparent paradox. *American Educational Research Journal*, 38, 813–834.
- Daub, T. C. (2004, July/August). Cost of cyberliving. *Foreign Policy*, p. 92.
- DeBell, M., & Chapman, C. (2003). *Computer and Internet use by children and adolescents* (No. NCES 2004-014). Washington, DC: National Center for Education Statistics.
- Dewey, J. (1938). *Experience and education*. New York: Macmillan.
- Dierking, L., & Falk, J. (2003, Spring). Optimizing out-of-school time: The role of free-choice learning. *New Directions for Youth Development*, 97, 75–88.
- Downes, T. (2002). Blending play, practice and performance: Children's use of the computer at home. *Journal of Educational Enquiry*, 3(2), 21–34.
- Eccles, J. (1999, Fall). The development of children ages 6 to 14. *The Future of Children*, pp. 30–44.

- Eccles, J., & Barber, B. (1999). Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *Journal of Adolescent Research*, 14(1), 10–43.
- Erikson, E. H. (1968). *Identity: Youth and crisis*. New York: W. W. Norton.
- Facer, K., Sutherland, R., Furlong, R., & Furlong, J. (2001). What's the point of using computers? The development of young people's computer expertise in the home. *New Media & Society*, 3(2), 199–219.
- Gallagher, L., Michalchik, V., & Emery, D. K. (2006). *Assessing youth impact of the computer clubhouse network*. Menlo Park, CA: SRI International.
- Gallego, M. A., & Cole, M. (2000). Success is not enough: Challenges to sustaining new forms of educational activity. *Computers in Human Behavior*, 16, 271–286.
- Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91(3), 481–510.
- Greenfield, P., & Lave, J. (1982). Cognitive aspects of informal education. In D. Wagner & H. Stevenson (Eds.), *Cultural perspectives on child development* (pp. 181–207). San Francisco, CA: W. H. Freeman.
- Gruenewald, D. A. (2003a). The best of both worlds: A critical pedagogy of place. *Educational Researcher*, 32(4), 3–12.
- Gruenewald, D. A. (2003b). Foundations of place: A multidisciplinary framework for place-conscious education. *American Educational Research Journal*, 40(3), 619–654.
- Guba, E. G., & Lincoln, Y. S. (1982). Epistemological and methodological bases of naturalistic inquiry. *Educational Communications and Technology Journal*, 30, 233–252.
- Hall, G., & Israel, L. (2004). *Using technology to support academic achievement for at-risk teens during out-of-school time*. Wellesley, MA: National Institute on Out-of-School Time.
- Halpern, R. (2002). A different kind of child development institution: The history of after-school programs for low-income children. *Teachers College Record*, 104(2), 178–211.
- Harrist, S. (2006). A phenomenological investigation of the experience of ambivalence. *Journal of Phenomenological Psychology*, 37(1), 85–114.
- Heath, S. B. (2001). Three's not a crowd: Plans, roles, and focus in the arts. *Educational Researcher*, 30(7), 10–17.
- Hull, G., & Greeno, J. (2006). Identity and agency in nonschool and school worlds. In Z. Bekerman, N. Burbules, & D. Silberman-Keller (Eds.), *Learning in places: The informal education reader* (pp. 77–97). New York: Peter Lang.
- Husserl, E. (1969). *Ideas: General introduction to pure phenomenology* (W. R. B. Gibson, Trans., 5th ed.). London: Allen & Unwin.
- Husserl, E. (1970a). *The crisis of European sciences and transcendental phenomenology* (D. Carr, Trans.). Evanston, IL: Northwestern University Press.
- Husserl, E. (1970b). *Logical investigations* (J. N. Findlay, Trans.). New York: Humanities Press.
- Illich, I. (1971). *Deschooling society*. New York: Harper & Row.
- Intel Corporation. (2006). Intel, Internet ve bilgisayar kullanım oranini artirma amaciyla yeni gelistirdigi Intel® Ag Yönetim Platformu'nu, Avrupa, Ortadogu ve Afrika cografiyasinda ilk olarak Türkiye'de uygulamaya sundu. Retrieved February 19, 2006, from <http://www.intel.com/cd/corporate/pressroom/emea/tur/archive/2006/266622.htm>
- International Society for Technology in Education. (2000). *National educational technology standards for students*. Washington, DC: Author.
- Jackson, L. A., vonEye, A., Biocca, F. A., Barbatsis, G., Zhao, Y., & Fitzgerald, H. (2006). Does home Internet use influence academic performance of low-income children? *Developmental Psychology*, 42(3), 429–435.

- Kockelmans, J. (1994). *Edmund Husserl's phenomenology*. West Lafayette, IN: Purdue University Press.
- Kozma, R. (1991). Learning with media. *Review of Educational Research*, 61(2), 179–211.
- Krapp, A. (2002). Structural and dynamic aspects of interest development: Theoretical considerations from an ontogenetic perspective. *Learning and Instruction*, 12, 383–409.
- Kulik, J. A., Bangert, R., & Williams, G. W. (1983). Effects of computer-based teaching on secondary school students. *Journal of Educational Psychology*, 75(1), 19–26.
- Kvale, S. (1996). *InterViews*. Thousand Oaks, CA: Sage.
- Laegran, A. S. (2002). The petrol station and the Internet cafe: Rural technospaces for youth. *Journal of Rural Studies*, 18, 157–168.
- Laegran, A. S., & Stewart, J. (2003). Nerdy, trendy, or healthy? Configuring the Internet cafe. *New Media & Society*, 5(3), 357–377.
- Lather, P. (1986a). Issues of validity in openly ideological research: Between a rock and a soft place. *Interchange*, 17(4), 63–84.
- Lather, P. (1986b). Research as praxis. *Harvard Educational Review*, 56(3), 257–277.
- Lauer, Q. (1965). Introduction. In E. Husserl (Ed.), *Phenomenology and the crisis of philosophy*. New York: Harper & Row.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. New York: Cambridge University Press.
- Liff, S., & Laegran, A. S. (2003). Cybercafes: Debating the meaning and significance of Internet access in a cafe environment. *New Media & Society*, 5(3), 307–312.
- Liff, S., & Steward, F. (2003). Shaping e-access in the cybercafe: Networks, boundaries and heteropian innovation. *New Media & Society*, 5(3), 313–334.
- Lincoln, Y. S. (1995). Emerging criteria for quality in qualitative and interpretive research. *Qualitative Inquiry*, 1(3), 275–289.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.
- Liu, M., Russell, V., Chaplin, D., Raphael, J., Fu, H., & Anthony, E. (2002). *Using technology to improve academic achievement in out-of-school-time programs in Washington, D.C.* Washington, DC: Urban Institute.
- Maarschalk, J. (1988). Scientific literacy and informal science teaching. *Journal of Research in Science Teaching*, 25(2), 135–146.
- Mahoney, J. L., & Zigler, E. F. (2006). Translating science to policy under the No Child Left Behind Act of 2001: Lessons from the national evaluation of the 21st-century community learning centers. *Journal of Applied Developmental Psychology*, 27, 282–294.
- Mastain, L. (2006). The lived experience of spontaneous altruism: A phenomenological study. *Journal of Phenomenological Psychology*, 37(1), 25–52.
- Mayer, R. E., Schustack, M. W., & Blanton, W. E. (1999). What do children learn from using computers in an informal, collaborative setting? *Educational Technology*, 39(2), 27–31.
- Merriam, S. (1995). What can you tell from an N of 1? Issues of validity and reliability of qualitative research. *PAACE Journal of Lifelong Learning*, 4, 51–60.
- Michaels, J. W. (1993). Patterns of video game play in parlors as a function of endogenous and exogenous factors. *Youth & Society*, 25(2), 172–289.
- Mitra, S., & Rana, V. (2001). Children and the Internet: Experiments with minimally invasive education in India. *British Journal of Educational Technology*, 32(2), 221–232.
- Moore, M. (2001, February 3). Internet sparks culture clash among Turks. *The Washington Post*, p. A17.
- Moustakas, C. (1994). *Phenomenological research methods*. Thousand Oaks, CA: Sage.
- Mumtaz, S. (2001). Children's enjoyment and perception of computer use in the home and the school. *Computers & Education*, 36, 347–362.

- Nespor, J. (1987). The construction of school knowledge: A case study. *Journal of Education*, 169(2), 34–54.
- Nespor, J. (2000). School field trips and the curriculum of public spaces. *Journal of Curriculum Studies*, 32(1), 25–43.
- Nicolopoulou, A., & Cole, M. (1993). Generation and transmission of shared knowledge in the culture of collaborative learning. In E. Forman, N. Minick, & A. Stone (Eds.), *Contexts for learning: Sociocultural dynamics in children's development* (pp. 283–314). New York: Oxford University Press.
- Nocon, H., & Cole, M. (2006). School's invasion of "after-school": Colonization, recolonization, or expansion of access? In Z. Bekerman, N. Burbules, & D. Silberman-Keller (Eds.), *Learning in places: The informal education reader* (pp. 99–121). New York: Peter Lang.
- Oldenburg, R. (1999). *The great good place: Cafés, coffee shops, bookstores, bars, hair salons, and other hangouts at the heart of a community*. New York: Marlowe.
- Oldenburg, R. (Ed.). (2001). *Celebrating the third place*. New York: Marlowe.
- Papert, S. (1993). *Mindstorms: Children, computers, and powerful ideas* (2nd ed.). New York: Basic Books.
- Pea, R. D. (1997). Teaching and learning with educational technologies. In H. J. Walberg & G. D. Haertel (Eds.), *Psychology and educational practice* (pp. 274–296). Berkeley, CA: McCutchan.
- Peshkin, A. (1988). In search of subjectivity—One's own. *Educational Researcher*, 17(7), 17–21.
- Pillay, H. (2003). An investigation of cognitive processes engaged in by recreational computer game players: Implications for skills of the future. *Journal of Research on Technology in Education*, 34(3), 336–350.
- Poland, B. D. (2002). Transcription quality. In J. F. Gubrium & J. A. Holstein (Eds.), *Handbook of interview research: Context and method* (pp. 629–649). Thousand Oaks, CA: Sage.
- Polkinghorne, D. (1989). Phenomenological research methods. In R. Valle & S. Halling (Eds.), *Existential-phenomenological perspectives in psychology* (pp. 41–60). New York: Plenum.
- Ragin, C. C., Nagel, J., & White, P. (2004). *Workshop on scientific foundations of qualitative research*. Arlington, VA: National Science Foundation.
- Reed, H., & Loughran, E. (Eds.). (1984). *Beyond schools: Education for economic, social, and personal development*. Hadley, MA: Common Wealth Company.
- Resnick, L. (1987). Learning in school and out. *Educational Researcher*, 16(9), 13–20.
- Rheinberg, F., & Tramp, N. (2006). Analysis of the incentive for intensive leisure-time use of computers. *Zeitschrift für Psychologie*, 214(2), 97–107.
- Roberts, D. F., Henriksen, L., & Foehr, U. G. (2004). Adolescents and media. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology* (2nd ed., pp. 487–521). Hoboken, NJ: John Wiley.
- Sairosse, T. M., & Mutula, S. M. (2004). Use of cybercafes: Study of Gaborone City, Botswana. *Electronic Library and Information Systems*, 38(1), 60–66.
- Sandholtz, J., Ringstaff, C., & Dwyer, D. (1997). *Teaching with technology: Creating student-centered classrooms*. New York: Teachers College Press.
- Sawchuk, P. (2003). *Adult learning and technology in working-class life*. New York: Cambridge University Press.
- Schustack, M. W., Strauss, R., & Worden, P. E. (1997). Learning about technology in a non-instructional environment. *Journal of Educational Computing Research*, 16(4), 337–351.
- Schwandt, T. A. (1997). *Qualitative inquiry: A dictionary of terms*. Thousand Oaks, CA: Sage.
- Seidman, I. (1991). *Interviewing as qualitative research*. New York: Teachers College Press.

- Selwyn, N. (1998). The effect of using a home computer on students' educational use of IT. *Computers & Education*, 31, 211–227.
- Selwyn, N. (2005). The social processes of learning to use computers. *Social Science Computer Review*, 23(1), 122–135.
- Smith, M. (1988). *Developing youth work: Informal education, mutual aid and popular practice*. Milton Keynes, UK: Open University Press.
- Smith, M. (2006). Beyond the curriculum: Fostering associational life in schools. In Z. Bekerman, N. Burbules, & D. Silberman-Keller (Eds.), *Learning in places: The informal education reader* (pp. 9–33). New York: Peter Lang.
- Subrahmanyam, K., Greenfield, P., Kraut, R. E., & Gross, E. F. (2001). The impact of computer use on children's and adolescents' development. *Applied Developmental Psychology*, 22, 7–30.
- Subrahmanyam, K., Kraut, R. E., Greenfield, P., & Gross, E. F. (2000). The impact of home computer use on children's activities and development. *The Future of Children: Children and Computer Technology*, 10(2), 123–144.
- Sutherland, R., Facer, K., Furlong, R., & Furlong, J. (2000). A new environment for education? The computer in the home. *Computers & Education*, 34, 195–212.
- Titchen, A., & Hobson, D. (2005). Phenomenology. In B. Somekh & C. Lewin (Eds.), *Research methods in the social sciences* (pp. 121–130). London: Sage Ltd.
- Tor, H., & Erden, O. (2004). A research about primary school students level who takes advantage from information technology. *Turkish Online Journal of Educational Technology*, 3(1). Available at <http://www.tojet.net/articles/3116.htm>
- Turkey State Statistics Institute. (2004). *Turkey's statistical yearbook*. Retrieved February 19, 2007, from http://www.tuik.gov.tr/yillik/yillik_2004.pdf
- Turkle, S. (1984). *The second self: Computers and the human spirit*. New York: Simon & Schuster.
- Turkle, S. (1997). *Life on the screen: Identity in the age of the Internet*. New York: Simon & Schuster.
- Uotinen, J. (2003). Involvement in (the information) society—The Joensuu Community Resource Centre Netcafé. *New Media & Society*, 5(3), 335–356.
- Uptitis, R. (1998). From hackers to luddites, game players to game creators: Profiles of adolescent students using technology. *Journal of Curriculum Studies*, 30(3), 293–318.
- Vadeboncoeur, J. (2006). Engaging young people: Learning in informal contexts. *Review of Research in Education*, 30, 239–278.
- van Manen, M. (1990). *Researching lived experience*. Albany: State University of New York Press.
- Vannatta, R., & Fordham, N. (2004). Teacher dispositions as predictors of classroom technology use. *Journal of Research on Technology in Education*, 36(3), 253–271.
- Verma, S., & Larson, R. (2003). Editors' notes. *New Directions for Child and Adolescent Development*, 99, 1–7.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wakeford, N. (2003). The embedding of local culture in global communication: Independent Internet cafes in London. *New Media & Society*, 5(3), 379–399.
- Wellington, J. (2001). Exploring the secret garden: The growing importance of ICT in the home. *British Journal of Educational Technology*, 32(2), 233–244.
- Wenger, E. (1999). *Communities of practice: Learning, meaning, and identity*. New York: Cambridge University Press.
- Windschitl, M., & Sahl, K. (2002). Tracing teachers' use of technology in a laptop computer school: The interplay of teacher beliefs, social dynamics, and institutional culture. *American Educational Research Journal*, 39, 165–205.

- Wolcott, H. (1990). On seeking—and rejecting—validity in qualitative research. In E. Eisner & A. Peshkin (Eds.), *Qualitative inquiry in education* (pp. 121–152). New York: Teachers College Press.
- The World Bank. (2003). *World development indicators*. Washington, DC: Author.
- Yedekcioglu, O. (1996, January). Use of computers at high schools in Turkey. *Technological Horizons in Education*. Available at <http://www.thejournal.com/articles/12380>
- Yesil, B. (2003). Internet cafés as battlefield: State control over Internet cafés in Turkey and the lack of popular resistance. *Journal of Popular Culture*, 37(1), 120–127.
- Zhao, Y., & Frank, K. (2003). Factors affecting technology uses in schools: An ecological perspective. *American Educational Research Journal*, 40, 807–840.
- Zhao, Y., Mishra, P., & Girod, M. (2000). A clubhouse is a clubhouse is a clubhouse. *Computers in Human Behavior*, 16, 287–300.
- Zhao, Y., Tan, S. H., & Mishra, P. (2000). Teaching and learning: Whose computer is it? *Journal of Adolescent & Adult Literacy*, 44(4), 348–354.

Manuscript received March 14, 2007

Revision received June 16, 2008

Accepted July 13, 2008